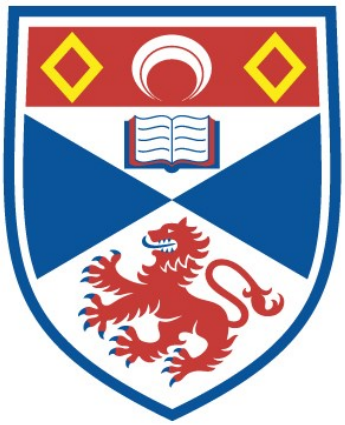
THE SCOTTISH EXPORT TRADE, 1460-1599, FROM THE 'EXCHEQUER ROLLS'

Isabel Guy

A Thesis Submitted for the Degree of MPhil
at the
University of St Andrews



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Declaration

I, Isabel Guy, hereby certify that this thesis which is approximately 40,000 words in length has been written by me, that it is the record of work carried out by me and that it has not been submitted in any previous application for a higher degree.

Date 2 December 1982

Signature

I was admitted as a research student under Ordinance No. 12 in October 1978 as a candidate for the degree of M.Phil.; the higher study for which this is a record was carried out in the University of St. Andrews between 1980 and 1982.

Date 2 December 1982

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I hereby certify that the candidate has fulfilled the conditions of the Resolution and Regulations appropriate to the degree of M.Phil. of the University of St. Andrews and that she is qualified to submit this thesis in application for that degree.

Date

1.12.82

Signature

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Chapter One

Introduction

"The customs records could be used as evidence of the fluctuating patterns of trade...they are at least worth the trouble of putting on a graph!" B. Webster, Scotland from the 11th century to 1603 (London, 1975), 139-140.

This thesis presents a quantitative examination of the Scottish export trade, 1460-1599, using the custumars' accounts which form part of the Exchequer Rolls of Scotland. The Exchequer rolls are one of the most accessible and massively informative of sources for the period they cover.(1) It has been shown that valuable information about the Scottish export trade and the state of the Scottish economy can be extracted from this source.(2) It is, however, complex and variable, and must be carefully interpreted before raw data is extracted. The first two sections of this introduction draw heavily on the invaluable work of Dr Athol Murray as a guide in understanding the inconsistencies of the record. The last section addresses the problems associated with using the accounts for compiling quantitative records of the Scottish export trade. We are dealing with one of the few areas of the Scottish economy which is recorded quantitatively. Investigation of the fluctuations in the volume of exports and the nature of the goods exported can, if considered over a sufficient period, supply considerable information on Scottish trade and thereby on certain facets of at least the market side of the early-modern Scottish economy.

THE EXCHEQUER ROLLS

In the fourteenth century there was one chief financial officer of the crown, the Great Chamberlain, who collected nearly all branches of the king's revenue and who met all classes of expenditure.(3) In the nineteenth century a selection of the Great Chamberlains' accounts was published, volumes i and ii in 1841, then an augmented third volume in 1845.(4) It was recognition at last of something of the importance of these Exchequer records and in fact led to the publication a few years later of the first volume in a series which was to supersede the Accounts of the Great Chamberlain of Scotland, called The Exchequer Rolls of Scotland. The twenty three volumes take the series to 1600, although the rolls themselves continue into the eighteenth century. The printed edition has been described as clear, reliable, even meticulous, and complete in that it reproduces marginal notes including deletions.(5)

The oldest original roll is dated 21 July 1326, although there exists a transcript made for the Earl of Haddington, apparently of extracts from the rolls of the years 1264-1266 and 1288-1290. From 1326 to 1708 there are records for almost every year, although not every year has a complete set.(6) Originally there were two rolls, one for the sheriffs' accounts, the other for accounts of the bailies and custumars of the burghs. It is this last group, the accounts of the custumars of the burghs with which we shall be dealing. In 1434 a third roll was added for the accounts of the ballivi ad extra.(7)

The rolls themselves were made of parchment membranes sewn together to the required length, each membrane measuring approximately one foot across and two feet in length.(8) The rolls, not only of importance as an historical source, were also an indispensable reference in their own time. They were consulted frequently to decide matters of precedent, for example in cases of land tenure, and to supply points of information such as when a burgh last rendered an account.(9) Regular payments of pensions or of endowments to religious houses, for example, would be authorised by the original grant normally contained in a charter: clerks could find evidence of previous payments in the Exchequer records. An extra-ordinary payment, such as a gift, would be authorised by a brieve from the king or perhaps an officer of the crown, thus within the records are references to payments per breve regis, or de mandato camerarius in which case there will also be the note written at the time the account was audited, Camerarius respondebit (the chamberlain will answer), which he would have to do at the audit of his own accounts.(10) But the most obvious reason for preserving the Exchequer records was that the royal officials needed them to carry out the next audit, each one was not a self sufficient event but began where the previous one had left off. The clerks of the audit needed a record of how the account had been left last time, whether is was in credit or debit to the crown.

Until the beginning of the sixteenth century the Exchequer was itinerant, moving mainly between Edinburgh, Linlithgow, Stirling or Perth. From quite early in the century the Exchequer was held in Edinburgh except for a move to Stirling, 1527, and to Linlithgow, 1530, in order to escape the plague.(11) It was necessary to preserve and protect the rolls, stored in Edinburgh castle between audits. In 1508 we find expenses paid for the Exchequer included carriage of the rolls from the castle to the Blackfriars, the building in which the Exchequer was held.(12) The next year £4 was spent on a chest in which to keep the rolls and the household books, and in 1534 the same amount again on two travelling chests.(13) Payments were also made, as in 1522, to the usher and two young men, for guarding the door of the Exchequer and the chest of rolls. By the sixteenth century the hereditary office of Usher of Exchequer had undergone some changes. Rather than claim expenses separately for his gown, reckoning board, its cover, plus stools, benches and other items of furniture provided for the Exchequer house, the Usher received an annual cash paymment instead. His earlier connection with Chancery was finished, and by the end of the fifteenth century, if not earlier, the office was exercised by deputy.(14)

The officers of the Exchequer changed in nature over time. The Great Chamberlain lost his supreme authority soon after James I's release from captivity in 1424, with the appointment of two new officials, the thesaurarius and the contra rotulator. Initially subordinate, they quickly superseded him. The duties of the Chamberlain became restricted to responsibility for the issues of the

Chamberlain Ayre. The title of one of the new officials was changed from contrarotulator to compotorum rotulator, or comptroller.(15) Put simply, his duties were concerned with regular income and expenditure, whereas the Treasurer dealt with irregular payments. The comptroller received the revenue from the royal property, that is from crown lands, burgh fermes, and the great customs.(16) Thus it is to him that the custumars of the burghs had to present their account annually. These major sources of his revenue were listed against him in the Exchequer rolls. In addition he received additional sums extra rotulis such as grassums paid by crown tenants, blench fermes and castlewards collected by the sheriffs. His expenditure was mainly in provisioning the royal household, some pensions and minor charges, and also the expenses incurred by the holding of the Exchequer.(17)

The Exchequer itself was not a permanent body or institution until after the sixteenth century, but had to be called into existence for each audit. Once the audit had been completed and the Auditors' commissions expired, the Exchequer simply ceased to exist until the next audit. The Exchequer was not so much an institution as an occasion, the audit of the royal accounts. About a week before it began the Lords Auditors were commissioned from members of the Lords of Council, especially those holding, or who had held, financial office.(18) This would include the Treasurer (or his deputy), and Comptroller. These two officers would not, however, be commissioned as Lords Auditors of their own accounts.

The audit of the Comptroller's account would normally be held annually, following the ordinary Exchequer. However, it could be neglected for a few years, or else occur more than once within a year if the man left office for any reason. At completion the last page was signed by the king and Auditors, and unlike the Treasurer's, the Comptroller's account was enrolled.(19)

The ordinary Exchequer dealt with the accounts of the sheriffs, ballivi ad extra, the bailies and the custumars of the burghs. It was held - again, normally but not necessarily - each year during the summer months of June, July or August, but records from other months are not unusual.(20) The date it was to begin would be decided by King and Lords of Council, and summons' sent out giving the legally required forty days notice. Originally the brieves were sent out only to the sheriffs, who were responsible for notifying every other accountant in their own sheriffdom, but at some point between 1547 and 1588 the wording of the brieve changed and each accountant was summoned individually.(21)

Until about the middle of the sixteenth century, because no clear separation of powers had developed and the members of one body were drawn from the other, not only could the Council deal with administrative and judicial business affecting the revenue, but also the smaller group of Lords Auditors of Exchequer could do the work of the whole Council if necessary. This could prove convenient to all concerned. In dealing with judicial cases which required consultation of the rolls, it might be easier to do so whilst they were out and

made available to the Lords of Council in Exchequer. In other cases, a hearing in Exchequer might be more convenient for a litigant who had to be there anyway in order to present his account for audit.(22) By 1541 we can begin to see some further separation of duties between the Court of Session and Exchequer. After the death of James V the functions of Council, Session and Exchequer become distinct. The Exchequer continued with its temporary existences without permanent staff: the Court of Session was then the appropriate body with which to deal in revenue cases when the Exchequer was not in session.(23)

Each Exchequer roll was headed by the date and place of the commencement of the Exchequer and a list of the auditors, although at times some or all of these details were ommitted. Each account began with the name and office of the accountant, whether it was he or a deputy who rendered the account, and the place and date at which its audit took place. The accounts followed a pattern: firstly the arrears, arreragia, from the previous account, if there were any; the charge, oneracio, the gross amount for which the accountant was liable, sometimes divided into separate items, oneres, as in the custumars' accounts; the total charge with and without the arrears; and the discharge, expense, a breakdown of what the accountant had actually done with the money collected. At the end or "foot" of the account, in pede compoti, appeared a statement of the final balance due to or from the accountant, or if the charge and discharge were equal the words et sic eque would be written.(24) The object of the audit was to see that individual officials accounted properly for the sums they had handled, never to examine, establish or record the financial position of the crown. Payments, or liability for them,

necessarily passed from one official to another, and thus the same sums recur in the accounts of both.(25)

It should be emphasised that the auditors were not interested in receipts and payments but in the accountant's personal liability for the sums due, whether or not such sums had actually been collected. Indeed, liability for unpaid arrears ceased neither at exit from office nor even at death, for the debt simply passed to one's heirs.(26) In practice the system was not as harsh as may be supposed for without strong legal backing the king would have received even less revenue than in fact he did. Discretion and a measure of pragmatism by king and auditors were often necessary to keep the system functioning. We find they would accept compositions (a lesser sum rather than the full amount owed) when there was no chance of full payment. So it is unusual to find arrears entered in the rolls for periods of more than ten years. Although the Auditors' prime duty was safeguarding the king's revenue, they were flexible enough to write off a bad debt when necessary.(27)

THE CUSTUMARS' ACCOUNTS

The custumars' accounts which form the record of the export trade are almost complete from 1326.(28) They make up perhaps less than a quarter of the Exchequer rolls, yet the revenue they generated, whilst not the greatest source of crown income, was of considerable importance to the Comptroller, with a net yield many times greater than, for instance, the burgh maills.(29)

Throughout the period, Edinburgh alone produced more customs revenue than all the other burghs put together: 54 percent of the gross amount in 1480, 59 percent in 1530, and nearly 65 percent by 1578. In contrast, the next most profitable burghs, Aberdeen, Dundee and Berwick, contributed 10.5 percent, nearly 7 percent, and 4.6 percent respectively, in 1480; Aberdeen 10 percent, Dundee 7.4 percent, and Perth 4.6 percent, in 1530; and Aberdeen 7.3 percent, Dundee 6.8 percent, Crail, Anstruther and Pittenweem together 7 percent, and Perth 3.7 percent, in 1578.(30)

It made sense for the Comptroller to hold also the office of custumar of Edinburgh, which gave him direct personal control over the single most important source of customs revenue. George Robison, custumar of Edinburgh from 1476, retained the office when appointed Comptroller in 1486. In the reign of James V, Comptrollers Robert Barton and James Colville held both positions at varying times.(31) More important, by 1525 it appears that the Comptroller was authorised to appoint the custumars, and was answerable for them(32): in March

1529 Barton was described as Comptroller and great custumar of Scotland.(33) That the Comptroller should take on so large a share of the responsibility for the collection of the customs revenue, by securing each custumar under his direct authority, indicates the importance of the customs as a source of revenue.(34)

There was statutory provision for two custumars for each burgh which traded overseas, although in practice there was often only one(35). Indeed, two or more small burghs sometimes had just one custumar between them. On the other hand a large port might have a custumar to deal with one part of the trade, such as salmon at Aberdeen, leaving the other custumar to deal with all the rest.(36) The jurisdiction of the custumar extended over not only the royal burgh itself but also a defined surrounding area, normally, although not always, corresponding to the area in which the burgh exercised its monopoly. The precincts of the burghs were subject to alteration, depending perhaps on the varying fortunes of one burgh and those of its nearest neighbours.(37) Royal burghs alone had a monopoly of overseas trade and were in themselves a source of legal controversy. Burghs fought to protect their monopolistic rights from encroachment by more recently-founded burghs in close proximity.(38) This monopoly has been claimed to constitute the main criterion of royal burghs.(39) However, some non-royal burghs such as St Andrews or Arbroath, clearly were involved in the export trade as the records of the accounts of their custumars appear in the Exchequer rolls. They sent commissioners to the Convention of Royal Burghs, paid their share of taxation assessed by the Convention, and enjoyed the same trading rights as the royal burghs.(40) An inland royal burgh could have its

own port on the coast: Edinburgh had Leith; Linlithgow, Blackness; Haddington, Aberlady.(41)

The commercial privileges enjoyed by the burghs carried with them the responsibility of bearing a portion of the country's taxation. When defending their monopoly rights in the courts, the burgesses - the only burgh inhabitants in possession of those rights - frequently argued that without guaranteed protection from "unfair competition" they could not possibly afford to pay their share of the tax burden.(42) It was in the interests of the crown, therefore, to maintain the royal burghs' monopoly of trade in order, on the one hand, to provide the realm with a source of taxation, and on the other, to make the collection of the customs revenue easier, more efficient, and perhaps less subject to evasion if the export trade was confined to a limited number of ports.(43)

Notwithstanding the burghs' commercial privileges, it was the crown which regulated foreign trade to its own financial advantage, and normally appointed the custumars who collected and accounted for the revenue. They were not even necessarily burgesses of the burghs to which they were appointed.(44) The customs revenue was annexed to the crown by Acts of James I (1424) and James II (1455).(45) James IV authorised the appointment of searchers through Act of Parliament (1493), who were to seek out and reveal any instances of evasion. The penalties were severe: loss of goods to the crown and a fine of £1 for every penny of unpaid duty.(46)

The levying of duty on customable goods took place before the goods were loaded, and the onus of getting this done lay with the merchant to whom the goods belonged, not the custumar.(47) If challenged, a merchant could not excuse the non-payment of duty by claiming, for instance, that the custumar could not be found. The duty to be paid on exports of wool was determined by weighing the wool on the tron: for other commodities it was sufficient for the custumar to estimate the quantity or value, and levy the duty accordingly. If his estimation was challenged and found to be at fault, the custumar had to repack the goods at his own expense; if he were correct, the goods were forfeit to the crown.(48) The whole procedure of levying the customs took place in the presence of the clerk of cocket, and when all had been paid he issued the merchant with a certificate of payment called a cocket.(49) Thus if the merchandise was to be sent to another, perhaps larger, port before export, production of the cocket protected the merchant from having to pay another lot of duty. He relinquished the cocket to the custumar of that port, who later would have to produce it at the Exchequer when his account was audited.(50)

The custumar kept a record of his dealings in his book of entry of ships. This contained details of the cargo of each ship, the date it was customed, the name of the ship, its master, destination, and the name of the merchant to whom each consignment of goods belonged. It would also include these details for goods for which a cocket from another port had been accepted.(51) From this information the custumar drew up what was called the customs book, or custumar's clerk's book. This ommitted all details of the ships and the dates, and listed under

each commodity the quantity of each consignment and the name of the merchant to whom it belonged, excluding those for which cockets had been produced.(52)

The clerk of the cocket also kept a record, the cocket book or cocket clerk's book. This contained the same details as were in the customs book and the two would normally be identical except for the names on the covers. This was intended as a check on the honesty of the custumar for both books were presented to the Exchequer at the audit of the custumar's account.(53) At Edinburgh the wool exports were recorded separately from all other goods. Each consignment was weighed at the tron, a record was kept, and from this was compiled the wool customs book. It was presented in Exchequer along with the duplicate tronar's book drawn up by the clerk of the tron.(54)

At the audit of the custumar's account the Exchequer clerks examined the information contained in the customs book, compared it with the cocket book, then added up each page to reach an exports total for each commodity. The duty payable was calculated according to the rates then in force, and the totals for each commodity added together to give the gross amount due for the whole account. This formed the charge, the <u>oneracio</u>, for which the custumar was liable.(55) From this figure the custumar claimed deductions which formed the discharge, <u>expense</u>, of the account. There was his own fee of 4d per £ of the gross charge, and that of the tronar, 1d per sack of wool.(56)

Allowance was made for goods entitled to pass duty free but which had been included in the gross charge. Within this category were the king's own goods, whether exported by him or sold to merchants and then exported. The king could remit all or a proportion of customs liability for an individual, for a longer or shorter period, either as a favour or in order to repay a debt.(57) There were permanent exemptions such as the fifty sacks of wool allowed to Melrose Abbey, or the more contentious claim by the burgesses of Aberdeen that they were exempt from paying duty on salmon.(58)

The endowments of religious houses sometimes included payments from the customs, and this amount would have to be deducted from the charge. The customs accounts of Perth show that both the Friars Preachers and the Carthusians in the burgh were supported in part by annuities paid for out of the customs receipts.(59) The cost of maintaining the tron was allowed for in the discharge. In 1463 the custumars of Kirkcudbright claimed 35s for the cost of cords, wood, and new scales; the custumars of Perth, Andrew Charteris and Robert Donyng, were allowed 21s for repairs to the tron in 1480.(60) It sometimes happened that goods for which the duty had been paid were not in the end exported. At the audit the custumar would have to produce the cocket, as proof of payment, and if he could convince the Lords Auditors that the goods had not left the country, normally by swearing an oath to that effect, then allowance for the sum involved would be made in the account.(61)

When all necessary adjustments had been made to the sum for which the custumar was liable, the Auditors would wish to see receipts for the custumar's payment to the Comptroller, the gross charge minus all allowances, which was the final discharge item. The Auditors would determine the status of the acountant: was he in arrears, needing to make up the sum outstanding in his next account; was he superexpended and thus in credit; or were the charge and discharge of the same amount, in which case he had made _eque_ in the rolls.(62) It was only after the Auditors were satisfied with the account that it was enrolled. Each account stated the total quantities and duty paid for each commodity, the _oneres_; the gross total of these, the _oneracio_; a full statement of the discharge, _expense_; and a note on how the account had been left. The primary data source for this thesis is the _oneres_ of the custumars' accounts, and the _oneres_ are essentially a digest of the customs books, which are in themselves an abstraction of the more detailed information contained in the books of entry of ships. So what we are dealing with is, in conclusion, a summary for each port of each commodity exported in the period between which the custumars drew up their accounts - usually one year.

SOURCE EVALUATION AND METHODOLOGY

There are various difficulties and imperfections in the data source which have had to be taken into account before the work of putting the data into a computer and constructing annual time-series and graphs could begin. It has been noted that although the Exchequer normally took place during the summer months, there are a number of records of audits which took place at different times of the year.(63) This could happen because an accountant left office, perhaps died suddenly, or because business left unfinished in the summer might be concluded at another session six months later; or because political troubles could interrupt the Exchequer itself.(64) This can complicate efforts to calculate annual totals of commodities and duty paid. It is also the case that not all royal burghs (and non-royal burghs which traded overseas) appear in the records every year for which there are records of an audit taking place. In some cases it is apparent why this should be, as for instance with the burgh of Berwick whose records indicate a healthy trading community making a sizeable contribution to the total customs revenue until they stop in 1482, the year Berwick fell to the English.(65) With other burghs it is not always so easy to find an explanation, and the gaps remain.

More serious, there is a complete gap in the detailed records from 1583-1589 inclusive, when the great customs of the entire country were leased for £4000 per annum. For this seven year period the Exchequer Rolls give us no information at all on the quantities of commodities exported.(66) The same problem on a smaller scale applies

for those years where the custumars' accounts have not survived, thankfully very few, 1470, 1472, 1536, 1571, and 1573.

The data with which we are dealing are not recorded in standardised units: the measures used vary not only with different commodities, but also at times within the one commodity.(67) There is also the problem of contemporary standardisation of the measures themselves, and the repeated efforts in this direction may be an expression of anxiety that this had not been achieved.(68) Throughout the Exchequer Rolls the long hundred of six score is in general use for numbers not referring to money. This is occasionally specified in the printed volumes by the phrase compotando sexies viginti pro centenario, and thus a distinction should be made between "v score" and "c".(69) It is sometimes the case that the quantity of a commodity is not given and has to be calculated from the duty paid, and vice versa. Here it is necessary to monitor carefully the various rates of duty levied.(70) Where both quantity and duty are not specified, for example Kinghorn in 1536 exported "salt and other goods", nothing was recorded for the amount in the figures for that commodity. When dealing with sums of money, the accounting was done in merks, and £.s.d., the merk being equal to 2/3 of £1, that is, 13s 4d.(71)

It is impossible to tell to what degree the customs record is distorted by corruption and inefficiency. There was always the risk of collusion between custumar and cocket clerk; or someone with the privilege of exporting his or her own goods duty free, working some sort of racket with other merchants' goods; or evading payment of duty by slipping out of the country from some remote part of the coast, or

by openly sailing out of port hoping it would not be reported. The possibility of evading payment of customs and remaining unpunished depended to some extent on the state of the central government at any particular time: whether it was weak and in disarray, such as during a royal minority, or strongly led by an adult king anxious to collect all possible revenue in an effort to remain solvent. For example, during the minority of James V, royal finances were in such confusion that it was not possible for the Comptroller to render a full account annually, and the audits of the custumars' accounts are unevenly spaced from 1522 to 1525.(72)

Regular attendance at the Exchequer by the accountants, though required, was not always enforceable.(73) Thus, in the second half of the sixteenth century repeated attempts to bring the custumars of Wigtown and Kirkcudbright to account at the Exchequer were unsuccessful until 1582, when Thomas Maclellan entered an account which covered the previous twenty seven years. The Lords Auditors apparently accepted it, complete with exact quantities given of hides, woollen cloth and other exports for all twenty seven years!(74) It was often the case that the Auditors had to accept the word of an accountant, such as when a custumar declared upon oath that no goods had been exported during the year, as could well be the case in a small burgh.(75) In 1527 the custumar of Kirkcudbright neglected to produce a customs book or cocket book to the audit, but swore an affidavit regarding the amount of duty collected, £20. He was ordered to produce the books in future, under threat of a £10 penalty, but for that year they simply had to take his word for it.(76)

In presenting the data, the problem of incomplete coverage for all burghs over the whole period has been dealt with by using a series of symbols indicating the state of the record for each burgh for each year.(77) Thus it is possible to tell at a glance which years provide the most and the least reliable figures. This information can be referred to in figures 1a-1d, in which the burghs are ranked according to percentage of total revenue generated over the 140 years. Each burgh's percentage contribution for the whole period appears in the left hand column, the figure repeated on both sections in which the burgh's name appears.

The classification chart is comprehensive enough to enable the viability of any burgh's account to be checked, but it also demonstrates that over eighty per cent of all customs revenue was generated by the top four burghs alone. Burghs ranked fifth to eighth are not large enough to cover the next ten per cent, and the rest are smaller still. It is true that for a small number of exceptional burghs their overall ranking masks an important contribution in one particular commodity, such as Culross, which contributed less than 0.7 percent to the total revenue and yet was a leading exporter of salt and coal (see figures 1a, 1b, 6.3, and 6.7). For each commodity dealt with in this thesis, extracts from the classification chart have been reproduced for the top exporting burghs, and placed alongside the figures showing annual export totals for that commodity. So for example, the records covering 87 percent of hides exports can be evaluated by closely examining the records of Edinburgh, Dundee and Ayr (see figures 4.5 and 4.5.a). It was sometimes the case that a

burgh had some part of its export trade dealt with in a separate account from the rest, such as Aberdeen's salmon account which was farmed for part of the time, usually for a tack of £100 per annum.(78) In these instances the state of the account which encompassed the largest part of the trade is given in figure 1a-1d, and the slightly different one for the separate item or items would be alongside the appropriate commodity chart, if it applied to one of the top exporting burghs.

There are seven different categories of accounts: regular, short, long, irregular, averaged, tack and missing. Of all these, only the missing accounts are really of no use whatsoever: in the chart they appear as blanks. A tack account is where the whole customs of a burgh for that year were farmed for a fixed sum. The lessee was often the custumar, who levied and collected duty in the normal way, paid the comptroller the tack duty, either making up or pocketing the difference.(79) The amount of the tack provides us with some indication of what the total was expected to be. This amount has been included in the total exports figures which are based on revenue only (figures 7.1-7.4), but the tack accounts are as good as missing regarding the figures for individual commodities. They are shown as "t" in the classification chart.

Averaged accounts cannot occur singly, they appear as averaged series. They can arise from one of two circumstances: firstly where a burgh fails to render an account for some years and finally provides one which has a single set of totals to cover the whole period. In that case the totals for each commodity were divided by the number of

years covered by the account.(80) Secondly, where a burgh rendered its account at such irregular intervals that each one is unusable as an annual total, either too long or too short, but when added together and divided by the number of years which, combined, they cover, will provide something like a set of annual totals. This has the advantage of maximum utilisation of available information, but the disadvantages are not only that the process irons out the very fluctuations we would like to examine, but also there is the distinct possibility that whatever it was that caused the accounts to be so erratic in the first place, could have also involved disruption to the export trade itself, but more misleadingly, perhaps only to the recording of that trade. For example, from 1568 to 1572 the exports of skins follow a low, straight line (figure 4.9). Figure 4.9.a explains that of the top three skins exporting burghs two of them, Aberdeen and Dundee, contribute nothing to the figures for those years, having tack accounts, and Edinburgh's accounts form an averaged series, so giving the same figure for five years. (The little burghs between them exported so little that it does not register on the graph). The averaged series appear on the classification chart as short runs of "^", one for each year.

Regular accounts are those which run for one year, plus or minus two months. A short account can be up to two months shorter still, eight to ten months: a long account, up to two months longer, fourteen to sixteen months. It is not unusual to find long and short accounts close together where a burgh might have its account audited rather late one summer and then early the next, or <u>vice versa</u>, providing quite adequate totals as there was really no disruption of the

records. Short, regular, and long accounts are indicated on the classification chart as single, double and treble horizontal lines respectively.

Irregular accounts are all those which do not conform to any of the above categories, and are shown on the chart as "i". They are over sixteen, or less than eight months long, but cannot be amalgamated into a coherent averaged series. In these instances the data they provide has been included in the annual figures, but they indicate that the totals arrived at should be treated with caution when the burgh conccerned is an important one.

Thankfully, for the entire period the accounts of the custumars of Edinburgh are present for all but thirteen years.(81) Thus we have some sort of record for an account which alone covered sixty percent of all Scottish overseas trade during the 140 years, for over ninty percent of that period. All the custumars' accounts in the published volumes of the Exchequer rolls covering the years 1460-1599 were gone through, and every item of all the commodities included in this thesis was recorded, for each burgh, for each year. All this information was entered into the University of St Andrews' main computer, in data files, and programmes compiled which processed the data in various ways. In fact statistical manipulation of the data was unsophisticated: simple arithmetical calculations were made, percentages taken, burghs and commodities ranked. The advantage of using the computer was in the sheer quantity of data involved. Computer graphics systems also produced the figures in volume two, accessing the data files.(82)

The difficulties created by working with non-standardised measures were overcome through detailed work on each commodity, reducing the measures used to a uniform standard. The sections in this thesis which examine each commodity individually give full details of the problems involved and the solutions found. Long hundreds have been converted to modern reckoning throughout.

It is not possible, unfortunately, to make an accurate estimation of the degree to which inefficiency and corruption within the system distorted the records. In this, of course, the Scottish records are like any other European commercial record of the period: smuggling was ubiquitous and bureaucracy everywhere undeveloped. References to allegations of forgery or tampering with a cocket suggest that there were problems, but the degree to which these were relatively isolated incidents or merely the tip of a large iceberg is difficult to establish. That the latter was the case was certainly the opinion of Sir John Skene, appointed Clerk Register on 19 September 1594, who in the following year wrote Proposals for Resuming Crown Lands and Increasing Revenue. In this work the section on the custumars indicates that Skene believed them to be involved with the merchants in systematic defrauding of the king through deliberately underestimating the quantities of goods exported, and thus duty levied. Through this abuse Skene claimed that the king was losing £1000 per annum, remembering that from 1583-89 the entire customs were farmed for £4000, that is, losing more on the great customs than from any other branch of crown property.(83)

We are, however, as much concerned in measuring trends as in the absolute volume of goods exported; if corruption was a relative constant, even if it ran at 20 percent of the total as Skene suggested, it would distort the record from this point of view less than if it were markedly variable from year to year. All things considered, it seemed worth the experiment of graphing the data and examining the patterns that fell out. As will be seen from the following chapters, these patterns are not random: and in so far as they make up a picture of trade that is consistent with historical interpretation, they justify treating the source as something not rendered totally useless by dishonesty and bureaucratic inefficiency.

The custumars' accounts in the Exchequer rolls indeed provide the best information we have to study Scottish export trade for this period. It is possible to discover from them patterns of trade for individual commodities, and develop an overall picture of Scottish exports. A study of the export trade is important and interesting for its own sake, as well as for what it reveals regarding the state of the Scottish economy in general. A further advantage of this particular data source is that it is one of the few branches of economic activity which can provide quantitative data.

Previous work in this field includes that of S.G.E. Lythe, James Dow, and Athol Murray, and earlier studies by Pagan, Rooseboom, and Gray.(84) The earliest scholars were little interested in quantification, and more recent studies have tended to rely on non-Scottish statistics: Lythe and Dow used material primarily from

the Baltic and Scandinavia. Athol Murray has made some use of statistics in his thesis on the Scottish Exchequer, his article in An Historical Atlas of Scotland, and most interestingly, in his article on the customs accounts of Wigtown and Kirkcudbright. Dr. Murray has shown what can be done: the present study attempts to develop this further, examining all the trading burghs over a longer period. So far there has been no major quantitative work done for the whole of Scotland covering the century following the accession of James III. The present study deals not only with this period, but also continues to 1599 in order to allow comparison with Professor Lythe's more detailed work which starts from 1550.

NOTES

1. B. Webster, Scotland from the 11th Century to 1603 (London, 1975), 133.

2. A.L. Murray, "The Customs accounts of Kirkcudbright, Wigtown, and Dumfries, 1434-1560", Dumfriesshire and Galloway Natural History and Antiquarian Society, 3rd series, xl (1963), 136-162.

3. Subordinate to him was the Clerk of Liverance who was responsible for provisioning the King's household, and also the Clerk of the Wardrobe. A.L. Murray, "The Pre-Union Records of the Scottish Exchequer", Journal of the Society of Archivists, ii (1961), 95; A.L. Murray, "The Comptroller, 1425-1488", Scottish Historical Review, lii (1973), 1-3, 17. In the 16th century the steward was responsible for the day to day management of the Household and was subordinate to the Comptroller.

4. A.L. Murray, "Pre-Union Records", 91-92.

5. B. Webster, Scotland from the 11th Century to 1603, 133. George Burnett was joint editor of volume i (1878), published volumes ii to xii, and prepared volumes xiii and xiv, by 1890. G. P. McNeill edited xv to xx by 1899. The printed series finishes at 1600 with volume xxiii, published in 1908.

6. M. Livingston, A Guide to the Public Records of Scotland (Edinburgh, 1905), 33; B. Webster, Scotland from the 11th Century to 1603, 133.

7. They were responsible for the King's property and ward lands. This was later known as the property roll and was closely connected to the crown rentals, the Rentalia domini regis, (nine surviving volumes cover 1476 to 1588). Entry in the Rentalia (rentalling) constituted and recorded the tenant's right to the land. There are rolls of the Exchequer of the Queen dowager for the years 1461 to 1463: the practice of enrolling minor acounts had finished by the 16th century. A.L. Murray, "The Comptroller, 1425-1488", 13.

8. A.L. Murray, "Pre-Union Records", 94. Exceptionally, the account for 1471 is made of parchment sheets sewn together into a book; Dr. Murray has suggested that the missing accounts for 1470 and 1472 may also have been in book form.

9. A.L. Murray, "Pre-Union Records", 94; A.L. Murray, "The Lord Clerk Register", Scottish Historical Review, 53, (1974), 126.

10. B. Webster, Scotland from the 11th Century to 1603, 134; A.L. Murray, "The Comptroller, 1425-1488", 21, 24; A.L. Murray, "The Lord Clerk Register", 131.

11. A.L. Murray, "Pre-Union Records", 93; A.L. Murray, "The procedure of the Scottish Exchequer in the early sixteenth century", Scottish

Historical Review, xl (1961), 93.

12. The Exchequer Rolls of Scotland (Edinburgh, 1878-1908), xiii, 123; A.L. Murray, "The Lord Clerk Register", 131.

13. A.L. Murray, "The Procedure of the Scottish Exchequer", 94.

14. A.L. Murray, "The Procedure of the Scottish Exchequer", 94-95.

15. A.L. Murray, "Pre-Union Records", 95-96. The study of the development of the duties of both Treasurer and Comptroller is hampered by the loss of nearly all their accounts down to the reign of James IV. For further details see A.L. Murray, "The Comptroller, 1425-1488", 1-29.

16. A.L. Murray, "The Comptroller, 1425-1488", 9.

17. A.L. Murray, "Pre-Union Records", 96; A.L. Murray, "The Procedure of the Scottish Exchequer", 116; A.L. Murray, "The Comptroller, 1425-1488", 11, 20-22.

18. A.L. Murray, "Exchequer and Council in the reign of James V", Juridical Review, n.s. 5 (1960), 209; A.L. Murray, "The Comptroller, 1425-1488", 22.

19. The audit cannot have demanded proof of payment as both officers were sued by creditors or pensioners for non-payment of sums for which allowance had been made in the accounts. A.L. Murray, "The Procedure of the Scottish Exchequer", 116-117; A.L. Murray, "The Comptroller, 1425-1488", 25-27.

20. ER, vii, 28-38, 137-154; x, 20-21, 96.

21. A.L. Murray, "The Procedure of the Scottish Exchequer", 90.

22. A.L. Murray, "Exchequer and Council", 222.

23. A.L. Murray, "Exchequer and Council", 223-224; A.L. Murray, "The Lord Clerk Register", 129-130.

24. A.L. Murray, "The Procedure of the Scottish Exchequer", 99. For example, ER, xviii, 85-86.

25. B. Webster, Scotland from the 11th Century to 1603, 135-138; A.L. Murray, "The Comptroller, 1425-1488", 21.

26. A.L. Murray, "The Procedure of the Scottish Exchequer", 100.

27. A.L. Murray, "The Procedure of the Scottish Exchequer", 101; A.L. Murray, "The Comptroller, 1425-1488", 23.

28. A.L. Murray, "Pre-Union Records", 94.

29. A.L. Murray, "The Exchequer and Crown Revenue of Scotland, 1437-1542", (University of Edinburgh Ph.D. thesis, 1961), 140; A.L. Murray, "The Comptroller, 1425-1488", 11.

30. ER, ix, 63-80; xvi 34-43, 58-60; xx, 293-297, 310, 313.

31. A.L. Murray, "The Comptroller, 1425-1488 ", 11; A.L. Murray, "Exchequer and Crown Revenue", 163.

32. Acts of the Lords of Council in Public Affairs, 1501-1554: Selections from Acta Dominorum Concilii, ed. R.K. Hannay (Edinburgh, 1932), 227.

33. Registrum Secreti Sigilli Regum Scotorum, ed. M. Livingston, et al. (Edinburgh, 1877-1966), i, no. 4104.

34. A.L. Murray, "Exchequer and Crown Revenue", 164; A.L. Murray, "The Comptroller, 1425-1488", 12.

35. A.L. Murray, "Exchequer and Crown Revenue", 141; ER, xv, 274, 514.

36. ER, ix, 79-80, 202, 214-6, 442, 445; x, 456; xix, 4, 273.

37. ER, xix, 81,110; T. Keith, "The Trading Privileges of the Royal Burghs of Scotland", English Historical Review, xxviii (1913), 456. In the Exchequer rolls the accounts of the burghs of Anstruther, Pittenweem and Crail were variously combined, but for convenience in this thesis are referred to as the Pittenweem group. This is particularly relevant to Chapter five.

38. A.L. Murray, "The Customs Accounts of Kirkcudbright...", 137; Records of the Convention of the Royal Burghs, ed. J.D. Marwick (Edinburgh, 1866), i, 189, 203, 236.

39. Keith, "Trading Privileges", 454.

40. ER, viii, 251, 318; x, 54, 610; Keith, "Trading Privileges", 458, 461, 463.

41. Keith, "Trading Privileges", 457.

42. Keith, "Trading Privileges", 460-1.

43. Keith, "Trading Privileges", 457-8; A.L. Murray, "Exchequer and Crown Revenue", 161.

44. A.L. Murray, "The Customs Accounts of Kirkcudbright...", 137.

45. APS, ii, 4, 42.

46. A.L. Murray, "The Customs Accounts of Kirkcudbright...", 144; A.L. Murray, "Exchequer and Crown Revenue", 159, 161.

47. A.L. Murray, "The Customs Accounts of Kirkcudbright...", 144, A.L. Murray, "Exchequer and Crown Revenue", 146.

48. A.L. Murray, "The Customs Accounts of Kirkcudbright...", 144-145.

49. A.L. Murray, "Exchequer and Crown Revenue", 146.

50. A.L. Murray, "The Customs Accounts of Kirkcudbright...", 145.

51. A.L. Murray, "Exchequer and Crown Revenue", 148.

52. A.L. Murray, "The Customs Accounts of Kirkcudbright..." 140; A.L. Murray, "The Procedure of the Scottish Exchequer", 106.

53. A.L. Murray, "The Customs Accounts of Kirkcudbright...", 141; A.L. Murray, "Exchequer and Crown Revenue", 148.

54. A.L. Murray, "The Procedure of the Scottish Exchequer", 106; A.L. Murray, "Exchequer and Crown Revenue", 150.

55. A.L. Murray, "The Customs Accounts of Kirkcudbright...", 138, 141; A.L. Murray, "Exchequer and Crown Revenue", 149.

56. A.L. Murray, "Exchequer and Crown Revenue", 141-2.

57. Keith, "Trading Privileges", 465; A.L. Murray, "Exchequer and Crown Revenue", 151-2.

58. This was not finally settled - against them - until 1538: A.L. Murray, "The Procedure of the Scottish Exchequer", 106; A.L. Murray, "Exchequer and Crown Revenue ", 153-4, 156.

59. ER, xviii, 104, 135, 147, etc.

60. A.L. Murray, "The Customs Accounts of Kirkcudbright...", 144; ER, ix, 72.

61. The rebate was due to the merchant who had paid the customs duty in the first place, of course. It appears that the custumars accepted bonds from the merchants as surety of payment, in which case the bond could be cancelled or adjusted. A.L. Murray, "Exchequer and Crown Revenue", 151.

62. A draft copy of the account was handed to the custumar to keep, which came to be called the eque. A.L. Murray, "Pre-Union Records", 94.

63. See above, page 7.

64. ER, xv, 54, 67.

65. ER, ix, 63, 145.

66. ER, xxi, 249, 303, 320; xxii, 16, 88.

67. ER, xvii, 458; xx, 248, 251.

68. Ronald Edward Zupko, "The weights and measures of Scotland before the Union", Scottish Historical Review, lvi (1977), 119-145; Ian Levitt and Christopher Smout, "Some weights and measures in Scotland, 1843", Scottish Historical Review, lvi (1977), 146-152; RCRB, i, 5, 237, 454. See particularly Chapter five.

69. P. Gouldesbrough, "The Long Hundred in the Exchequer Rolls", Scottish Historical Review, xlvi (1967), 80.

70. ER, xxi, 6, 159.

71. ER, xix, 80, 173.

72. A.L. Murray, "The Procedure of the Scottish Exchequer", 95-6; ER, xiv, 432-442; xv, 50-66, 178-186, 265-276, 361, 513.

73. A.L. Murray, "The Procedure of the Scottish Exchequer", 96; APS, ii, 347, 372.

74. A.L. Murray, "The Customs Accounts of Kirkcudbright...", 154.

75. A.L. Murray, "The Procedure of the Scottish Exchequer", 107.

76. A.L. Murray, "Exchequer and Crown Revenue", 148; ER, xv, 362.

77. See Figures 1a-1d.

78. ER, xiii, 92-3, 372, 389, 572; xv, 66, 276, 444.

79. ER, xix, 80, 82, 109, 111; xx, 150, 250.

80. ER, xx, 143.

81. 1461, 1470, 1472, 1536, 1566-7, 1573, and 1583-9.

82. Very many thanks to Ms Angela Lamb, computer technician, Department of Psychology, University of St Andrews.

83. A.L. Murray, "Exchequer and Crown Revenue", 147; A.L. Murray, "Sir John Skene and the Exchequer 1594-1612", Miscellany, i, Stair Society, Edinburgh, 1971, 145.

84. Please refer to bibliography.

Chapter Two

The European Market for Scottish Wool and Woollen Cloth: the General Background

One thing immediately becomes clear from the Exchequer data - the degree to which the Scottish export trade (perhaps the entire economy) was heavily dependent upon the humble sheep. This chapter and the next deal with two sheep products, wool and woollen cloth, which over the 140 years together accounted for nearly half (47.5 percent) of all customs revenue. The wool export trade declined almost to nothing in the course of the period but even so over the whole time span it generated three times as much duty as did woollen cloth. Chapter Four includes many varieties of sheep and lambskins, the fells alone added to wool and woollen cloth acounted for over 60 percent of Scotland's income from the customs.

The Exchequer record itself gives no information as to the destination of exports. Evidence as to what markets were available to Scottish merchants is scattered and incomplete, but examination of it can give a reasonable idea of the scope and range of Scotland's trading links. Historians agree on the general poverty and backwardness of Scotland throughout the period, and certainly the pattern of trade was one of exchanging raw materials and luxuries, or even simply better quality goods, which she was unable to provide for herself. Nevertheless, if in European terms the volume was negligible and the range restricted, for what Scotland could supply there was a certain demand.

It is evident at least that Scotland had an abundant supply of sheep. In 1498 Pedro de Ayala reported enthusiastically that there were immense flocks of sheep, especially in the "savage" portions of Scotland, and that wool was one of the three principal items generating customs revenue.(1) James IV is reputed to have had 20,000 sheep, and the relatively peaceful relations with England during most of his reign allowed for a degree of economic revival in the Scottish southern uplands, especially in sheep farming.(2) And later, Nicander Nucius, visiting in 1545, was astonished at the multitude of sheep he found in Britain, a comment presumably applicable to Scotland as well as to England.(3)

For most of the population, sheep provided essential resources of food and clothing. There was an abundance of fleeces, though generally considered to be of poor quality and made only into coarse fabrics.(4) Cloth-manufacture was Scotland's prime traditional industry, broadly divided into two sections. In rural areas country weavers made the coarser plaids which served the needs of the rural population. References to country fulling mills suggest some technical advance on a purely cottage industry, at least in some areas.(5) Within the burghs cloth manufacture was more highly organised, and better quality cloth was produced by the guilds' craftsmen. Dyers, fullers, weavers, tailors and skinners were involved in the struggle between craftsmen and merchants in the burghs. The merchants dominated but the craft guilds lobbied hard for privileges, gaining corporate recognition in Edinburgh for the skinners in 1474, and the weavers and tailors in 1500.(6) These two

branches of Scotland's cloth industry met most of the day to day needs of the population. The fine textiles required by the aristocracy and the Church were generally foreign made and imported.(7)

Scottish woollen cloth is believed to have been far inferior to English broadcloth, firstly, because of the raw materials used - Scottish sheep produced low-quality fleeces - and secondly because manufacturing and finishing techniques were unsophisticated. In fact there were several grades of wool and cloth, and if Scotland could not normally produce the best her products were not uniformly Europe's worst. Hector Boece (1527) described Buchan as a profitable area for sheep, for it passed all countries lying about it in riches of white and delicate wool, and in the vale of Esk the wool was so small and white that there was nothing to compare with it in Britain. Not just wool but cloth also: in Dumfries small and delicate white woollen cloth was made, attractive to foreign merchants.(8) Boece's impression is clearly a good one - or at least he made out a good partisan case. Scottish woollens proved to some degree acceptable to a wider European market in competition with the product of far more advanced textile industries.

The foremost of these was the English industry. England too was well provided with sheep, and woollen goods formed the basis of her export trade also. The English cloth industry was divided similarly to the Scots. There was a network nationwide of small, local craftsmen serving their own village or town markets, uninvolved in inter-regional, much less international trade. Alongside this were several strictly localised, highly organised groups of specialist

producers, whose textiles were sold in markets over large parts of Europe.(9) English sheep were famous for their high-quality fleeces which made for finer quality cloths, the criterion of quality being fineness of fibre. This varied over different parts of the country, the best wool of all coming from Leominster, produced by a small Ryeland or Herefordshire breed of sheep. By contrast, wool from the northern counties was considered the coarsest produced in England, comparable to that from across the border in southern Scotland.(10)

From the 1470s until the middle of the sixteenth century English cloth exports grew rapidly, controlled by the Company of Merchant Adventurers of England which held the legal monopoly of England's woollen cloth exports.(11) Heavy English broadcloths were the most popular. Made in the West Country, they were sent out of London to Antwerp to be dyed and finished to precise specifications. Other cloths, kerseys, lighter and cheaper, and dyed and finished in England, were popular in German and Swedish Baltic coast towns. Most of this trade to central Europe went via Antwerp, the most important commercial centre in Northern Europe until political troubles in the 1560s and '70s brought on its decline.(12) Other importers of English cloth included France, Spain, Portugal and Italy.(13)

The export of English wool was in the hands of the Company of the Merchants of the Staple which held a monopoly. The staple town was Calais, through which almost, but not quite all the wool was channelled. This trade, at one time so important and profitable, slumped during the 1520s and did not recover: home demand for the raw material was one factor inhibiting export.(14) It is clear from the

English customs records that woolfells too were exported, and England generally dominated the European market for woollen goods.(15) Scotland could not compete as a rival, but still succeeded in cornering a small share of the market, supplying goods of low quality perhaps, but also low price. We shall examine the extent of the demand at the bottom end of the market for what Scotland could supply, a demand that existed not only in areas where English woollen exports dominated, but even to a limited extent in England itself.

Anglo-Scottish trade is interesting in that it had obvious advantages, yet equally clear points against it. On the one hand the short distances involved in coastal trading, plus the possibility of using an overland route, considerably reduced the level of risk in commercial ventures between Scotland and England. On the other hand over much of the period the two countries had their political differences, at times open war, and were not sufficiently dissimilar in climate to pursue different and complementary objectives in land use, as did for instance Scotland and Norway.(16) Piracy on both sides was liable to disrupt merchant shipping even in times of peace. Scottish pirates raided ships from both east and west coast ports, especially in the Irish Channel, and English pirates attacked Scottish ships on their way to France or Spain using either the east or west coast route.(17)

Yet despite difficulties, in times of political peace Anglo-Scottish traders were keen to renew contacts and do business. In 1482 England established Berwick and Carlisle as legal entry points for Scottish goods. The merchants of Berwick were allowed to import

the coarse, low-valued Scottish wool and re-export it directly to the Netherlands without recourse to the wool staple at Calais.(18) By the seventeenth century, in both the West Riding and Lancashire textile industries, wool from Scotland and the English northern counties was being used to make the coarsest varieties of cloth.(19)

There is evidence that not only wool, but Scottish cloth too was imported into England. In 1586 the people of Boston in Lincolnshire reported on their trade with the Scots, which included small amounts of coarse cloth.(20) On the other hand, English wool and woollen cloth was imported into Scotland.(21) Towards the end of the sixteenth century Scotland sought to stimulate her own textile industry by reducing the inflow of English cloth and legislating intermittently against the export of wool. At this period both countries were trying to achieve the same thing, protect their native industry by discouraging imports of cloth and exports of wool, and were highly suspicious of one another. Throughout the seventeenth century large quantities of English wool were thought to be smuggled across into Scotland and re-exported. To counter this the English merchants sought to impose the restriction that all wool leaving Scotland should be sold only in England, a move strongly resisted by the Scots who feared the English would then pay only rock-bottom prices.(22)

It is not easy to estimate the extent of Anglo-Scottish trade overall. It has been claimed that even by 1600 England was of no great economic significance to Scotland's commercial activity.(23) Yet Ludovico Guicciardini, writing in the mid-sixteenth century, was of the opinion that together England and France provided the Scots with

most of the imports they needed.(24) A major item the Scots imported from France was a supply of wine. In 1467 an Act of Parliament specifically named Bordeaux and La Rochelle as legitimate centres for Scottish trade. No doubt most trade was with Edinburgh and the other large east coast burghs, but not all: for example in 1499 a ship from Bordeaux, the Cristofe, loaded with 75 tuns of wine sailed for Wigton or Kirkcudbright. The risks involved in sailing past the southeast coast of England were avoided by trading directly with a west coast port.(25) Rouen and Dieppe were two other major French ports with which the Scots traded, both towns containing small communities of Scottish merchants who had settled there.(26)

Although the Scots had only basic staple items to offer the French, they were able to find a market for them, both woollen cloth and quantities of raw wool in a country which was not only already importing supplies of English cloth, but which also had a textile industry of its own. A partial explanation is that they were catering for different ends of the market. France manufactured both native woollen cloth and linens, and silks in some towns. Scotland was eager to be a consumer of luxury items, so far as resources permitted, importing from France not only wine but a variety of goods, including textiles such as the sixteen pieces of taffeta of various colours brought back to Scotland in 1506 by Robert Barton.(27) Of the staple goods Scotland had to export, France was most interested in skins and fish.(28) Supplies of raw wool were marketable in the north and northwest, Flanders and Normandy.(29) Its supposed low quality does not appear to have been a problem, indeed Scottish wool was able to compete successfully against coarse English wools sold at Calais.

Fifteenth century English merchants complained that whereas Scottish wool paid 1/2 merk custom and the wools of Normandy, Picardy and Flanders paid none, their own coarse wools had to pay 50s custom making them uncompetitive. Scotland's success may in part have been because low production costs kept the price attractively low.(30) Possibly due to the difference in price, or because England restricted the export of raw wool available at Calais, one eminent French clothier, Guillaume de Varyte, was keen enough to send his agents to Scotland to find supplies of wool.(31)

Scottish woollen cloth was marketable in areas where the native textile industry was less dominant, such as La Rochelle or Bordeaux. In September 1598 David Wedderburne sent linen and white woollen cloth to be sold in Bordeaux or England, whichever would pay the better price, and the money raised to be spent on fine Bordeaux wines, half claret half white.(32) The "auld alliance" involved amongst other things commercial advantages to Scots trading in France, and the marriage of Mary with the Dauphin in 1558 greatly extended and widened the range of privileges, as Scot became naturalised Frenchman and <u>vice versa</u>.

During the later part of the sixteenth century, after the Scottish Reformation, closer ties with England accompanied a weakening of the alliance with France. The commercial privileges the Scots had enjoyed became less reliable, and the terms of trade less favouvable to them, even if the volume was not diminished. In 1581 Edinburgh merchants informed the Convention of Royal Burghs that they had been warned by the factors in Dieppe that the king of France intended to

levy a new impost upon all Scottish cloth imported into his territory. As the burgh commissioners sought to organise resistance, the financial threat worsened. By 1587 the factors not only of Dieppe but also of Rouen, Newhaven, and other parts of Brittany and France, were being pressed for the money. Worse, this new tax was to be levied not only on cloth but other goods too: 6 francs per polk of wool, 5 solz per 100 skins, 20 solz per dacre hides, 15 solz per white web, 45 solz per 100 cairsays.(33) There was a threat of more commodities becoming liable. Already it was feared that fish would be included, at a rate of 1 sol per frank of all fish.(34) The merchant burgesses determined to oppose the new imposts threatening their profit levels, by appealing to the Privy Council and sending a representative to the ambassador in France to enlist him in pleading their cause.(35)

Whatever the success or otherwise of their protests, Franco-Scottish trade continued to prosper. Fynes Moryson, in 1598, described France as one of the four chief places where the Scots traded - the others being England, the Netherlands, and the Baltic - and the range of goods imported to France continued to include both wool and cloth. The cloth was coarse, both linen and woollen, "which be narrow and shrinkle in the wetting".(36) Clearly Franco-Scottish trade was not unimportant to both countries, although of greater significance to Scotland than to France.

From where else could regular quantities of wine be obtained? In fact there was an alternative supply. By the end of the sixteenth century Spanish wine was widely available in Scotland.(37) In 1597 David Wedderburne instructed merchant John Scrymgeour, who was sailing to Spain in a St Andrews ship, to buy good, elegant wine, the finest wines, as he thought best.(38) Other Spanish imports were frequently luxury items - confectionery, marmalade, textiles such as taffeta, Toledo swords - also salt, woad, horses, and a significant amount of iron, other iron imports coming mainly from Sweden.(39)

To pay for these, Scottish merchants exported parcels of cloth, although clear evidence is lacking as to what types of cloth were involved and whether or not it was Scottish made. Also when possible, wheat, barley, leather, and other basic items were exported. Spain had to rely on imports of some staple items.(40) There appears no evidence to suggest that Scottish wool found a market in Spain: wool production was one activity in which Spain excelled. Indeed, during our period the deteriorating quality of English wool and the increasing restrictions on its export led to the emergence of Castilian wools as the foremost raw material used in the making of high-quality woollen cloth in western Europe, notably the textile manufacturing centres in the Spanish Netherlands.(41)

Some idea of the volume of this trade may be gained by a comparing it with that of Scotland and England. In 1570 17,000 sacks were exported from Santander alone, perhaps as much again or even more from Bilbao, further along the northern coast. From the 1630s till

the 1670s annual export totals ranged from between 36,000 to 60,000 sacks.(42) In the period we are studying Scotland's highest wool export total, in 1464, barely reached 2,500 sacks: in England, the peak year was 1476 with an exceptional total of just under 14,500 sacks.

The market for woollen cloth in Spain was supplied primarily by the well-established textile industries in Italy and Catalonia, which served most of the needs of the countries around the Mediterranean. For the major part of the sixteenth century only the new Flemish worsteds were able to penetrate this market to any great extent, and English cloth achieved modest sales in exchange for wine and oil.(43) It is possible but difficult to confirm that Scottish woollen cloth was also successfully imported, perhaps in small quantities, cheap and coarse, offering an alternative price and product to their usual cloth made with their own Spanish wool.

Until the latter part of the sixteenth century Scottish merchants' contacts with Spain were limited to indirect access to a restricted range of exports available in the markets of the Spanish Netherlands. Trade between Scotland and Spain became more direct, and expanded, in the post-Reformation period when, in religious matters at least, the two countries were most deeply divided.(44) The Protestant church leaders tried to prevent trade being carried on with Roman Catholic counties, and in 1593 the General Assembly succeeded in getting the Convention of royal burghs more or less to agree to suspend trading with Spain until it could be done "without perell of conscience".(45) Equally dangerous was the risk of a Protestant Scot

falling into the hands of the Spanish Inquisition, and tales of the tortures and atrocities that had been imposed on fellow Scots may have deterred some merchants from seeking business in Spain.(46)

Despite these two dangers, trade with Spain did expand and the decision of the Convention was not long-lasting. The Anglo-Spanish war played a part in promoting direct trading links between Scotland and Spain, for when the English could not openly enter Spanish ports they resorted either to obtaining Scottish passports or to chartering Scottish ships. Trade with Spain had its attractions, for it was a nation at peace with Scotland, had desirable goods to sell, and was thought to pay high prices for its imports - and best of all, to pay in bullion.(47) Spain's trade balance was in almost permanent deficit from at least 1550, and it appears likely that the negative balance was financed by the re-export of Mexican and Peruvian silver. In this situation the Scottish merchant was happy to participate, regardless of the physical and spiritual risks, in trade which combined both profit and duty, for the bringing in of bullion was constantly enjoined by Act of Parliament.(48)

The beginnings of amicable trading relations between Scotland and the Netherlands go back to before the fifteenth century, and continued more or less unbroken to beyond the end of the sixteenth. The Netherlands held a dominating position in European trade, providing a centre for the exchange and redistribution of goods from a wide area. For Scotland this meant a regular market for her staple goods, and access to a variety of those luxury items not able to be produced at home, yet without which the standard of living in Scotland would

remain far below that of the rest of Europe.(49) This branch of Scottish trade has been described as the most important part of the commercial relations between Scotland and Europe, (50) and it was here that the Scottish staple was established. By the end of the fifteenth century trade was flourishing as well as ever. Pedro de Ayala wrote that Spaniards living in Flanders had reported to him that Scottish commerce was more considerable than ever, and continually increasing.(51)

The demand for Scottish woollen cloth appears to have been limited in contrast to the demand for wool. The Netherlands had its own flourishing textile industry making linen and woollen cloth. In the latter half of the fifteenth century the English cloth trade was in strong competition with the well-established Flemish manufacturers in the making of both fine and coarse woollen cloth, although the Flemings also earned very large sums by finishing undyed English cloth. They demonstrated their ability to adapt by moving firstly into lighter, generally worsted cloths, and then later in the sixteenth century by widening their markets and improving their product through the use of high-quality imported Spanish wool.(52)

It says much for the Scottish merchants that they were able to sell any woollen cloth at all. There was plainly a great deal of trade, but specific details of shipments are fragmentary and sometimes ambiguous, as the following examples show. In 1551 a Scotsman, John Forthringham, brought to Flanders a mixed cargo which included among a variety of other items, 8950 sheepskins, 325 ells of "northlands" cloth, and 25 ells of kersey. Either or both of the last two items

could have been manufactured somewhere other than Scotland, perhaps England. In 1560 a Scots ship arrived at Middleburg from Aberdeen with another mixed cargo including some cloth of unmistakeable origin, "kerseys out of Scotland". The same year a Dutch boat arrived carrying woolfells f. om Burntisland.(53)

Guicciardini's report on Scottish goods brought to Antwerp mentions first a great quantity of sheepskins, wool, and some cloths described, predictably, as ill-made.(54) A final piece of evidence, illustrating the range of Scottish goods available and which included woollen cloth, is a declaration from the Convention of Royal Burghs held in Stirling, 1574. No ship was to sail from Scotland to Flanders carrying wool, cloth, skins, hides or suchlike staple goods except twice in the year, at the Easter and September markets, (Pasche mercat and Rude mercat). Violation of this rule carried a penalty of £20. It was, however, permissible for merchants to trade there at all times of the year with anything other than these staple goods.(55) In June 1495 Andrew Barton imported a pok of brown wool, and another sack two years later for a merchant called Robert Rynd, who sold it for £17 in Berri. As regards the quality, the same year Andrew Halyburton recorded delivery of a sack of middling wool, which he sold in Bruges for 21 merks. It seems probable that a good proportion of the wool handled by Scottish merchants in Scottish ships was in fact native grown, though some may have been from the north of England.(56)

It is clear from the record of the struggles of the competing towns that to secure the Scottish staple was considered desirable. Bruges, Antwerp, Veere and Middleburg were all willing to offer extensive privileges to the Scottish merchants in order to gain a monopoly, or something like a monopoly, of Scottish trade. During the early fifteenth century the Scots had moved between Bruges and Middleburg, settling at the latter town in 1468 where Andrew Halyburton acted as Conservator 1492-1503.(57) Until 1541, when the staple was finally settled at Veere apart from a few breaks in the 1570s, Antwerp, Middleburg and Veere offered an interesting variety of concessions to tempt the Scots. A Scots merchant should not be liable for the debts of another; in trading matters he should have the same freedom as others frequenting the place. In the fifteenth century these were considered marks of special favour.(58)

By 1540 Antwerp was ready to offer a great deal more. A pleasant house at reasonable rent for the conservator, in which the merchants could make their lodging and store their merchandise; for consumption within this house, or any other houses they used, duty free alcohol. The conservator would be empowered to deal with disputes involving other Scotsmen, and it would be lawful for Scottish merchants to sell and dispose of, in Antwerp, all the merchandise they were already accustomed to selling there. There would be a wharf set apart for the unloading of their ships; dock labour would be available at a regulated wage; pilots provided for getting in and out of the harbour; and if any Scottish ship were to be thrown upon a shelf or sandbank between Antwerp and Veere or Flushing, the city would offer all

possible assistance. The Scottish merchants would not be obliged to pay Zealand customs more than once over, and if they were forced to pay more than once they would be reimbursed. To some the offer seemed irresistible. Deputies from Edinburgh visited Antwerp and reported it more commodious than Veere, in fact they found no place, city or harbour, so proper as the town of Antwerp.(59)

At about the same time two other representatives from Edinburgh in turn reported that in truth they knew that the harbour and town of Middleburg was, yes, more proper, less dangerous, more accessible, easier to get in and out of and more commodious than any other harbour, town or place.(60) Middleburg was willing to offer, in addition to Antwerp's concessions, a free church or chapel on a site of their choice, complete with altar; credit facilities of a sort when the market was low; and if Edinburgh should agree to pay half the expenses, all possible aid would be provided if a Scottish merchant should be attacked by pirates whilst within the jurisdiction of the Emperor.(61)

The merchants favoured Middleburg but the king did not, he decided in favour of Veere "as most commodious and convenient".(62) If in this instance the merchants had to give way, normally they had considerable control over the staple, through the Convention of Royal Burghs and the appointment of the conservator. This office combined approximately the duties of consul and commercial agent, and although they changed somewhat over time, can be summarised as follows. He was to aid to his utmost merchants in danger, to find out those guilty of introducing counterfeit money, and to be present in person or by

deputy at the unloading of every ship, in order to arrest forbidden goods. He was to observe all legislation and ensure the merchants did likewise, and was empowered to exercise summary jurisdiction between merchants, factors and sailors. Most significant to the merchant community, he was to allow only free merchants bringing proof of their freedom to engage in trade.(63) The advantage to the crown was that by limiting the number of locations at which the loading and unloading of ships took place, control was tighter and the levying of customs duties more effective, thus generating more crown revenue. In fact the system appears to have worked well. The Scottish staple succeeded because there existed strong mutual interests between the complementary economies of the Netherlands and Scotland.(64)

The last of the four areas described by Moryson as chief trading centres was the Baltic. From the 1470s the Danes were growing more powerful in relation to the Hanse and to the rest of Scandinavia, and thus were able to control the Sound. The Scots were on excellent terms with Denmark which smoothed commercial relations, and if by Baltic standards Scottish trade was insignificant, for Scotland it was another outlet for the basic commodities she had to offer, and a valuable source of tar, timber, iron, hemp, potash - industrial raw materials - and most important, of grain and other foodstuffs in time of stortages.(65)

According to Moryson, cloth and skins were Scotland's primary exports to the Baltic. Skins were Scotland's most regular export to the area, and formed the greatest relative contribution to the total intake of any major commodity (see chapter four for details of which

varieties of skins were involved). Those from sheep and lambs were the largest group.(66) Cloth too was an unspecific term, covering that made of flax or hemp as well as wool, and some may have been made in England and re-exported. The Baltic imported quantities of English cloth, yet there was still room for at least a small amount of Scottish cloth at the lower end of the market - small in contrast to England, that is.(67)

If we compare the volume of Scottish cloth imported to the Baltic as calculated by Lythe (68) with the total amount leaving Scotland as recorded in the Exchequer rolls, some interesting results show.(69) Despite imperfect data, it appears that in the 1560s the annual average volume of Scottish cloth exported to the Baltic was over 50 percent of all Scottish cloth exports. By 1574-79 it had dropped to 20 percent, in the 1580s, 11 percent, and in the '90s, only 5 percent. Two things can explain a percentage drop, and both appear to have been at work in this instance. Firstly, from Lythe's figures it is clear that the amount of Scottish cloth imported to the Baltic declined absolutely. Secondly, according to the Exchequer accounts cloth exports from Scotland expanded, although unsteadily, over this period. The annual averages drawn from the Exchequer rolls are only a guide: for instance the figure for the 80s is calculated from only three annual totals - 15'80, '81 and '82- as those for the rest of the decade do not exist.(70) Even so, it seems clear that the Baltic took a decreasing share of Scotland's cloth exports during the second half of the sixteenth century. This raises some questions: was it due to slackening demand, or inability to supply? Where were the expanding markets to which the Scottish cloth was sent during this period of

rising export levels, given that a decreasing proportion was going to the Baltic?

Scotland had commercial links with Scandinavia beyond the Sound, and openings there for exporting woollen goods. Trade with Norway had gone on for centuries, merchants at one time exchanging goods at Orkney and Shetland. It was not unknown for Scots to settle as burgesses in Norwegian towns, as often happened in places where Scots traders had been operating for a long time.(71) During the sixteenth century supplies of Norwegian timber were increasingly in demand, and considered important enough to deserve particular protection at the Convention of Royal Burghs in 1578. However, there is no mention of any of the woollen goods being exchanged for all the timber.(72)

With Denmark and Sweden economic contacts were made in the fifteenth century which formed the beginnings of stronger trading links later. By the mid-fifteenth century Scottish merchants had established themselves in Denmark, Copenhagen was a centre for traders and shipowners, well placed en route to the Baltic. Diplomatic ties were strengthened by the marriage in 1468 of James III to Princess Margaret of Denmark. Political and commercial links were confirmed in 1492 when Scottish ambassadors negotiated a military alliance which included a clause permitting freedom of trade between the two countries. Five years later Danish merchants in Scotland were given assurance of protection by letters of conduct.(73) There is no evidence though that Denmark was interested in any of Scotland's woollen goods.

Trade between Scotland and Sweden developed during the sixteenth century as both realised they could supply merchandise the other needed. Sweden was exporting wood and iron, which Scotland wanted. Of Scottish woollen goods Sweden imported neither woolfells nor raw wool, but took cloth, salt and fish. From the Lödöse customs book of 1546 the most valuable commodity imported from Scotland was salt.(74) Also there were five different kinds of cloth, Scotch, English, heavy, russett, and kersey, making a total of 1159 ells.(75) The Exchequer record for 1546 is particularly poor, and the total arrived at for exports of woollen cloth that year is almost certainly an under-estimation. The annual total is reckoned in dozens, and the volume of cloth exported to Lödöse converts to 96.58 dozens. 3742.84 left Scotland, less than 2.6 percent went to Lödöse. In fact the proportion was smaller still, as the Lödöse figure clearly includes non-Scottish cloth.

By 1561-2 more Scottish ships were arriving at Lödöse, now known as Nyl̈öse. They came from Edinburgh, Dundee, and the east coast ports, and their major item of export was woollen cloth. There was a greater quantity and variety than previously, in fact over twenty different types of cloth were named. They totalled 1600 and 2700 ells in 1561 and 1562 respectively, and by the same calculation as before they represent 2.21 percent and 3.7 percent of the cloth leaving Scotland. Exports of salt had declined, but the range of minor exports had widened to include articles of clothing, small hardware goods, and some re-exported luxury items, notably wine. Scotland continued to import Swedish iron and timber. By the 1570s the volume

of goods imported to Nyløse had dropped, cloth had fallen to 560 ells in 1572-3 and was less than 200 ells after that.(76) 560 ells measured against the total export figure for 1572 (1573 is missing) is 0.91 percent. Although the volume was reduced, most of the cloth appears to have been Scottish made, apart from a little from Flanders and Gotland and some English kersey. The basic trading commodities remained cloth and salt in one direction and timber and iron the other, but the reduced level of trade overall was because recovery was slow after the Dano-Swedish war of the '60s, during which Nyløse was destroyed and only rebuilt in 1572. It was not until the '80s that trade was as flourishing as it had been previously, with further expansion the following century.

Scottish trade with eastern Sweden was slower to develop than that with Nyløse. The first Scottish trading ship reached Stockholm in 1562, but when war broke out the following year the Sound was closed to Swedish traffic. During the '70s contacts were renewed and Scottish ships were recorded in the Stockholm customs books. At first the numbers were small, but increasingly regular, and formed a trading base which within fifty years would overshadow that of the western ports. Stockholm exported to Scotland both bar and osmund iron, and timber, although the timber was less important than at Nyløse. Scotland sent cloth, both Scottish and foreign, salt, articles of clothing, French wine, and small amounts of a variety of re-exported goods. By the closing decades of the sixteenth century Scottish trade with Sweden, unknown in the Middle Ages, was well established and ready for further expansion.

This survey of the main trading areas to which Scottish trade was directed is intended to give an impression of the main markets for Scottish wool and woollen cloth. The next chapter returns to the data provided by the Exchequer Rolls to indicate the trends over time in the total exports of these two commodities, the most important in the entire package of the Scottish export trade.

NOTES

1. P. Hume Brown, Early Travellers in Scotland (Edinburgh, 1891), 44, 42.

2. S.G.E. Lythe, "Economic Life", in: J.M. Brown, ed., Scottish Society in the fifteenth Century (London, 1977), 71.

3. P. Hume Brown, Early Travellers, 60.

4. S.G.E. Lythe, The Economy of Scotland in its European Setting (Edinburgh and London, 1960), 39.

5. Lythe, The Economy of Scotland, 38; Lythe, "Economic Life", 74.

6. Lythe, The Economy of Scotland, 38; Lythe, "Economic Life", 72; Ranald Nicholson, Scotland: The Later Middle Ages (Edinburgh, 1978), 563; P. Hume Brown, Scotland Before 1700 (Edinburgh, 1893), 185-6.

7. Lythe, The Economy of Scotland, 38; Lythe, "Economic Life", 76.

8. P. Hume Brown, Scotland Before 1700, 68, 76, 77.

9. R. Davis, English Overseas Trade 1500-1700 (London, 1973), 8-9.

10. P.J. Bowden, The Wool Trade in Tudor and Stuart England (London, 1962), 29.

11. Davis, English Overseas Trade, 44; F.J. Fisher, "Commercial Trends and Policy in 16th Century England" in: E.M. Carus-Wilson, ed., Essays in Economic History (London, 1954), 153-4.

12. Davis, English Overseas Trade, 7, 12, 14; Fisher, "Commercial Trends", 154.

13. Davis, English Overseas Trade, 12, 18.

14. Ibid., 9, 44; E.M. Carus-Wilson and O. Coleman, England's Export Trade 1275-1547 (Oxford, 1963), 122.

15. Ibid., 14; G. Schanz, Englische Handelspolitik gegen Ende des Mittelalters (Leipzig, 1881), 76-84.

16. Lythe, The Economy of Scotland, 215.

17. N.A.T. Macdougall, "Foreign Relations: England and France", in: J.M. Brown, ed., Scottish Society in the 15th Century (London, 1977), 102.

18. W.S. Reid, Skipper from Leith: the History of Robert Barton of Over Barnton (Philadelphia, 1962), 21; Bowden, The Wool Trade, 108.

19. Ibid., 69, 71-2.

20. Lythe, The Economy of Scotland, 216.

21. The Acts of the Parliaments of Scotland (Edinburgh, 1814-75), ii, 105; G. Donaldson, Scotland : James V - James VII (Edinburgh, 1978), 244.

22. Lythe, The Economy of Scotland, 220, 224; Bowden, The Wool Trade, 195.

23. Reid, Skipper from Leith, 21.

24. The Ledger of Andrew Halyburton, Conservator...in The Netherlands, ed. C Innes, (Edinburgh, 1867), xxx, xl.

25. Reid, Skipper from Leith, 22; Lythe, "Economic Life", 80.

26. Reid, Skipper from Leith, 21.

27. Davis, English Overseas Trade, 9; Reid, Skipper from Leith, 81.

28. See Chapters Four and Five.

29. Lythe, The Economy of Scotland, 183.

30. E. Power and M.M. Postan, Studies in English Trade in the 15th Century (London, 1933), 50, 363, 367.

31. Lythe, The Economy of Scotland, 183.

32. Ibid., 184; Wedderburne of Dundee's Compt Buik: 1587-1630, ed. A.H. Millar, Scottish History Society, 28, (Edinburgh, 1898), 72-3.

33. POLK: Polk, pok, pock: a bag, wallet, poke, sack. Chambers Scots Dictionary; a pok weighs 305 stone, one stone = 16 pounds troy. Reid, Skipper from Leith, 45.
SOLZ: is the plural of the old French sol, a sous or shilling, ten of which were equal to an English shilling. Records of the Convention of the Royal Burghs of Scotland, ed., J.D. Marwick (Edinburgh, 1866), index, glossary.

34. FRANK: meaning uncertain, but may be referring to the French coin, the franc, and here mean a franc's worth of fish.

35. RCRB, i, 117, 269-270.

36. P. Hume Brown, Early Travellers, 87.

37. Lythe, Economy of Scotland, 189.

38. Wedderburne Compt Buik, 87.

39. Lythe, Economy of Scotland, 189-90; Donaldson, Scotland: James V - James VII, 248.

40. Lythe, Economy of Scotland, 190; Charles Wilson and Geoffrey Parker, An Introduction to the sources of European Economic History 1500-1800, volume 1: Western Europe (London, 1977), 43.

41. Jonathan I. Israel, "Spanish wool exports and the European Economy 1610-40", Economic History Review, xxxiii (1980), 193-4.

42. Wilson and Parker, Western Europe, 46.

43. Davis, English Overseas Trade, 20.

44. Lythe, "Economy of Scotland", 186; M. Lynch, Edinburgh and the Reformation (Edinburgh, 1981).

45. Donaldson, Scotland: James V - James VII, 194; RCRB, i, 402, 485; ii, 5.

46. Lythe, "Economy of Scotland", 187.

47. Ibid., 188.

48. Wilson and Parker, Western Europe, 47.

49. Lythe, The Economy of Scotland, 232; Lythe, "Economic Life", 76-8.

50. S.V. Brakel, "A neglected source for the history of the commercial relations between Scotland and the Netherlands during the 16th, 17th and 18th centuries", Scottish Historical Review, xvii (1919-20), 1.

51. P. Hume Brown, Early Travellers, 43.

52. Davis, English Overseas Trade, 9, 20, 22.

53. Lythe, The Economy of Scotland, 238.

54. The Ledger of Andrew Halyburton, xl-xli.

55. RCRB, i, 32.

56. Ibid., 57.

57. Lythe, The Economy of Scotland, 234-5.

58. J. Davidson and Sir Alexander Gray, The Scottish Staple at Veere: a study in the economic history of Scotland (London, 1909), 143.

59. M.P. Rooseboom, The Scottish Staple in the Netherlands (The Hague, 1910), no. 54, lx-lxiv.

60. Ibid., no. 56, lxv.

61. Ibid., no. 57, lxvi-lxviii.

62. Davidson and Gray, The Scottish Staple at Veere, 162.

63. Lythe, The Economy of Scotland, 235.

64. Ibid., 235-6.

65. Lythe, "Economic Life", 77-8; S.G.E. Lythe, "Scottish Trade with the Baltic 1550-1650", in: J.K. Eastham, ed., Economic Essays in Commemoration of the Dundee School of Economics 1931-1955, (Dundee,

1955), 77.

66. P. Hume Brown, Early Travellers, 87; Lythe, "Scottish trade with the Baltic", 65, 75.

67. Ibid., 66, 75; A. Friis, Alderman Cockayne's Project and Cloth Trade (London, 1927), 228.

68. Lythe, "Scottish trade with the Baltic", 74. I have used the corrected figures.

69. In order to compare the different units of measurement used both were converted to ells: dozens were multiplied by twelve, pieces by forty. T.C. Smout "Overseas Trade of Scotland 1660-1707", Cambridge University Ph.D. thesis, 1959, 124, fn3.

70. Also, in the Exchequer rolls the figures for 1566 and '67 were unusable and the annual average was calculated without them.

71. B.E. Crawford, "Foreign Relations: Scandinavia", in: J.M. Brown, ed., Scottish Society in the 15th Century (London, 1977), 94-5.

72. RCRB, i, 76.

73. Crawford, "Foreign Relations: Scandinavia", 85, 90.

74. See Chapter Six.

75. J. Dow, "Scottish Trade with Sweden 1512-1580", Scottish Historical Review, xlviii (1969), 64, 71.

76. Ibid., 71, 72, 76.

Chapter Three

Trends in Wool and Woollen Cloth Exports

WOOL

Raw wool was sold abroad in declining yet still substantial amounts until the early 1540s. After this date the record deteriorates in some years, but it is clear that by the end of the century there had occurred a contraction of the wool trade to a fraction of what it had been. A comparison of Scottish and English wool exports over the period for which there are figures available, 1460-1544, reveals no strong or sustained association between them.(1) Yet the trend of the English figures was downward, and the frequent coincidence of some of the more noticeable peaks and troughs suggests that Scotland was sensitive to the same forces of supply and demand within the European market as England. The main fluctuations of the wool trade will be pinpointed in the analysis which follows. For clarity the period can be understood as four consecutive phases, of unequal length. 1460-75, a somewhat unsteady and slipping prosperity; 1476-1533, a gradual decline, steep before 1495; 1534-42, an apparent upsurge; and 1543 until the end of the century, a dramatic and irreversible slump.

For Scottish wool exports the first fifteen years were the most prosperous of the whole period, peaking in 1464 with an export total of 2400 sacks. (England's highest figure, in 1476, was over 14,400 sacks). There was some stagnation during the early 1470s, although it is difficult to judge how severe as the accounts for 1470 and '72 are missing. By 1475 exports were back up to well over 2000 sacks, but it

was a short-lived recovery. During the two years 1468 and 1475 in which there were outbreaks of plague, with quarantine regulations and associated disorders, (2) wool exports in fact increased, although in both cases there was a drop immediately afterwards. Here, as in other instances throughout the period, the evidence of whether or not plague disrupted the community to the extent that overseas trade was affected, is inconclusive.

During the second phase, from 1476 until 1533 export levels were significantly lower than in the previous period. The record is good enough to provide an adequate picture of trade during these years except for the first half of the 1520s. At this point the English wool figures dropped sharply, and although Scotland's appear to be doing likewise the record is not reliable. Within this period of slow decline there were not only some particularly good and bad years, but also a middle period of relative stability - 1495-1511 - during which export levels moved less erratically and remained slightly higher than in both the previous twenty years and in the period that followed it down to 1533. In considering the more important peaks and troughs within this long second section, 1478 stands out as a particularly bad year with wool exports only a little over 600 sacks. This was the lowest total so far, and would not be worsened till 1513, thirty five years later. Exports of woolfells also dropped sharply, yet woollen cloth did not, an indication perhaps that demand existed for the manufactured article, but not for the raw material. In England, too, exports of wool and fells had suffered a dramatic drop the previous year, the lowest figure until the 1530s. This has been explained as part of the cyclical character of the wool trade (3) and Scotland

appears to have been affected by the same market forces, in this case a little later than England. In 1478 the revenue generated by all Scottish exports was noticeably diminished, confirmation of how large a proportion of the total was the duty from wool (see Figure 7.3).

The other major slump in wool exports within this second section was 1513-14, with figures even lower than in 1478. 1513 was the year of the battle of Flodden, in which the king and many leading Scotsmen were killed, and the accession passed once again to a minor. Clearly Scotland was in difficulties, but what is not clear is whether or not disruption caused by political upheaval was such that the export trade was negatively influenced. The battle of Flodden was fought on 9 September: by that date the custumars' accounts were already audited, those of Aberdeen and Edinburgh, the two top exporting burghs (Figure 3.4) having been completed by 30 July and 3 August respectively. The low export totals were not the result of administrative chaos, for the Exchequer continued to audit the accounts in regular, orderly fashion. Yet the totals of wool exports for 1513 and '14 were markedly reduced, as was Scottish trade generally. If this was due to Flodden and its aftermath, then this trough should appear at this point for all commodities. 1513 was a particularly bad year for fells, but not so for wool cloth. Exports of herring fell that year, but salt increased, admittedly from a low level. Trade overall was lower, but then with wool forming so large a part of the whole, when it was low it had to make a noticeable difference to the total export figure. Interestingly, English wool exports also dropped in 1513 as England, too, was suffering the disruptions of war. Yet it may be that both countries were

experiencing simply another drop in demand for their supplies of raw wool, quite independently of the political mistakes and manoeuvrings of those years.

Other times in which a drop in Scottish wool exports coincided to within a year with a similar fall in English exports were 1485, 1491, 1497, 1504, 1524 (here the Scottish figure is unreliable), and 1533. The two countries also had good years in common although quite frequently England peaked one year later than Scotland: 1480, in England 1481; 1495, in England 1496; 1498; 1503, in England 1502; 1510, in England 1511; 1519; and 1526, England 1527. In all these instances the suggestion is that Scotland's wool trade was affected more strongly by international market forces than by events at home. The political crises of 1482 seem not to have adversely influenced the wool trade, nor James' death in 1488. However, instability in Flanders (4) may have contributed to the contraction that followed, with both Scotland and England reaching a low level by 1491. After 1497, another poor year, there was improvement despite outbreaks of plague during the following seven years, which disrupted the holding of the Exchequer.(5) In 1501-2 some parts of Europe were suffering from wheat shortages.(6) This may account for high wool exports in 1503, needed to offset the cost of grain imports, or it may be that a tightening of the regulations that year confining wool stores to the burghs, led to more efficient collecting of duty.(7) This improvement was followed by an immediate drop in 1504, due not only to changes in the market perhaps, but also to Edinburgh having a short account.(8)

By 1510 a certain amount of lost ground had been made up since the decline of the late 1490s. If the wool trade appeared to be just holding its own, the years till 1519 (when the record is good and the figures can be expected to indicate with some reliability the pattern of trade) show that exports were subject to more extreme fluctuations than ever before. 1515 was a good year but exceptional, and not bettered for over twenty years. There followed another decline, and then another recovery. What may have been happening during these years of violent fluctuation was a certain amount of stock- piling, the result of another bout of plague, this time prolonged enough to disrupt transportation and shipment of supplies. Although plague reappeared in 1511 it was not until October 1512 that Edinburgh took wide-reaching protective measures.(9) The custumars' accounts had already been audited, most of them before the end of July.(10) Thus it is the 1513 accounts the following summer which first show the effects of the plague regulations. What this does not explain is how so many custumars and other officials with accounts to be audited from all over the country, managed to travel to Edinburgh and presumably back home again, if the protective regulations so prohibited the movement of people and goods. However, it may be that supplies of wool were held up, ready to come onto the market in greater quantities when the regulations were eased.

During the early 1520s the data are unreliable but what evidence there is suggests that trade was not flourishing. In 1519 plague had returned in or near Edinburgh, (11) and only ten custumars produced their accounts the following year, and in 1523 some burghs were

complaining that a troubled realm had interrupted trade.(12) The record improves in 1526 with exports at about the same level as in 1519, but immediately they plunge down again till 1533, the end of this second phase. As before, termination of minority by the king in 1528 had no obvious beneficial influence upon Scottish trade. The only year in which the wool figures fell significantly less than in the others was 1531, a year in which English woollen exports slumped. It is possible that England's trading problems were the result of her political conflict with the Netherlands, which Scotland did not share, and that this may have left an opening in the market which Scotland was able to exploit.(13) Yet this conflict had begun two years previously, when Scottish wool exports had just dropped 40 percent in three years. During the same period, 1529-31, plague had recurred near Edinburgh, and the constant re-issuing of a variety of protective orders indicates a severe outbreak.(14) Just how disruptive this was is not clear: the Exchequer had to adjourn to Linlithgow, and yet the custumars' accounts were audited in regular fashion throughout the plague years.(15) Although woollen exports dropped in 1529 and '30, they had recovered by 1531, and Scottish trade overall showed no significant drop at this time. What may be of greater significance is that English wool exports were continuing to fall, both countries appearing to have had difficulties in selling their supplies of wool.

The third phase covers the years 1534-1540, the last seven years of relative prosperity before long term contraction set in. The peak was in 1539 when approximately 1900 sacks of wool were exported, the highest total since the 1470s. By 1538 plague was spreading misery in various parts, particularly St Andrews, although strict protective

measures were not yet issued and the volume of not only wool, but exports overall, continued to rise. By 1541 the Scottish staple was finally settled at Veere, which should have led to greater stability and smoother business dealings, all designed to promote trade between Scotland and the Netherlands.(16) Whatever the benefits overall to Scottish trade, as regards wool exports the annual totals immediately began plummeting downwards and stayed there. It may be that the apparent rise in Scottish exports over these years is partly the result of an unusually efficient and conscientious administration which tightened up the system, extracted more revenue, and recorded a greater proportion of what was actually exported, than had previously been the norm. Indeed, in 1540 legislation was passed which attempted to confirm and strengthen the monopoly rights of the free burghs.(17)

For wool exports alone it may be helpful to compare the pattern once again with that of England. By 1522 English wool and fell exports had dropped substantially, and whereas there is no tight, year by year correlation with Scotland during the following twenty years, both countries suffered a very similar experience of decline, brief recovery, and further decline. For both, recovery followed the trough of 1533 up to a peak in Scotland in 1539 and England 1542, then finally an irrecoverable slump. However it should be noted that Scotland's achievement in 1539 was relatively much greater than England's the following year. For Scotland it was the highest total for almost seventy years, a figure comparable to those from the years of prosperity. For England, although her 1542 total was twice that of Scotland's greatest year for wool exports, compared to her own boom years the figure was a low one.

In considering the fourth and last phase, from 1543 to the end of the century, it is important to be aware of the state of the record which for perhaps half of the time is either deficient or missing. In these years the wool export figures are either imperfect or lost altogether. However, those years in which the record is good show consistently that the export trade in raw wool had suffered long term contraction. The number of sachs leaving Scotland fell from over 1800 to 200 per annum in four years. Then followed seven years for which the record is poor, but annual totals based on averaged series indicate some improvement, and it is probable that they are an under-estimation of the true export totals. That these years were difficult ones for Scotland has already been demonstrated, with the death of the king, accession of yet another minor, the "Rough Wooing", and plague. The Exchequer audits were disrupted. It is not possible to tell to what extent those involved were able to continue producing, buying, and dispatching goods for export.

The averaged series have a levelling effect upon the export figures, and in these years may mask the effects of the political problems Scotland encountered with the Netherlands, problems which certainly would have affected trade, and which began ironically immediately after the Scottish staple was established. Politically, Scotland was moving into closer alliance with France, and into war with England. France was at war with the Emperor, who was England's ally and overlord of the Netherlands. The situation was not helpful to Scottish-Dutch trade, and the Scots' attacks on both Dutch and English shipping brought reprisals. By 1544 Maximilian had ordered

that Scottish shipping was to be seized, the goods sold, and the Scots were to be regarded as public enemies. The next year the king of England coaxed the Flemish into attacking sixteen Scots ships, retaliation followed and peaceful trade was impossible. Hostilities dragged on until 1550, the Scots having acquired a reputation for piracy, a practice they were suspected of finding more profitable than regular trade.(18)

During these years when the record is not good the available export totals are subject to a range of interpretation as to how far short of the true figures they might be. This problem does not apply to the 1550s when Edinburgh's account at least was regularly audited, and the familiar pattern of fluctuating good and bad years re-emerges, this time at a noticeably lower level. 1551 stands out as a relatively good year. At this time grain prices were high in England, and presumably Scotland too, given the evidence of food shortages. Edinburgh fared particularly badly as the surrounding Lothians, which normally supplied the capital, has suffered badly from attacks by the English. It is possible that grain had to be imported, and that wool exports were stepped up in an effort to pay for the food supplies. It may be that cessation of hostilities enabled trade to pick up. It is also possible that the increase for 1551 is more apparent than real, due only to more settled circumstances enabling the administration to function efficiently in the collecting and recording of export duties.

If 1551 was one of the better years in the last half of the century - although at less than 700 sacks it was worse than during the slump of the early 1530s - it was followed by a sharp drop which lasted for a steady four years. The winter of 1554-5 was exceptionally severe, killing off large numbers of livestock, including sheep.(19) 1555 also saw the export of wool and other staple goods to England prohibited by Act of Parliament, yet either the English market was small or the legislation ignored, for the export level remained steady, only to shoot up the year following.(20) In that year crops were poor and famine or famine prices reported over wide areas of Europe.(21) It may be that the rise in wool exports, (plus fells, cloth and exports overall), was due to Scotland's efforts to pay for shipments of grain from the Baltic, needed to feed the people. Regretably, in Lythe's work on the Baltic trade where he examines the relation between grain imports and Scottish exports, 1556 is not dealt with.(22) 1557 was a particularly poor year, as wool exports from Edinburgh slumped. The following three years showed some improvement, but the wool trade remained depressed when compared to the level of exports prior to 1543, and 1562 was another poor year even though Edinburgh had a long account.

For the ten years 1563-1573 recorded wool exports were very low, although the record is poor and unreliable. From 1574 until the end of the century - excluding the gap in the 1580s - there are reasonably good accounts for the top exporting burghs, but the level of wool exports remained far below what it had been. In 1578 there was a minor peak, with exports at 600 sacks, the same quantity which one

hundred years earlier had been the lowest point in a three year slump. In the final decade 1595 was the best year, with exports of 400 sacks, almost double those for the other years. It was in 1595 that measures against the export of wool were tightened, and at the Convention of Royal Burghs that year it was decided that the magistrates of each burgh should have the Acts of Parliament prohibiting the export of wool put into sharp execution, and penalties should be imposed with all diligence.(23) It is not easy to tell how effective these measures were, but taking a long-term view of the Scottish wool trade it is apparent that from the 1540s this most important part of Scotland's export trade had dwindled to only a fraction of what it once had been.

One result of this was a severe fall in customs revenue generated by wool exports, and the effect this had on other branches of Scottish overseas trade is examined in the chapters which follow. But right at the end of the period steps were finally taken to increase the rate of duty on exported wool, which had remained constant throughout the period at £1 6s. 8d per sack.(24) In 1597 the rate was increased to £6 6s. 8d, and the difference this made to the amount of revenue is clearly shown in Figure 3.2.(25)

WOOLLEN CLOTH

In the custumars' accounts the woollen cloth is normally reckoned in dozens, that is, twelve ells, each of approximately 37 inches in length.(26) There are indications that the quantity of cloth was estimated for the purposes of calculating duty, and the owner had the right to challenge the custumar's estimation at the risk of escheating the cloth to the Crown if the custumar was proved correct.(27) However, the custumar was liable for the expenses of re-packing if the owner's challenge was upheld, and so to protect himself it is to be expected that in practice the custumar's estimation would err, if at all, in favour of the merchant rather than the Crown. If this is the case, then the overall woollen cloth export figures from the Exchequer Rolls are likely to be an under- rather than an over-estimation.

At first glance the rates at which the duty is calculated appear inconsistent, almost random, and the legislation is not clear. Until the end of the fifteenth century many burghs imposed an ad valorem rate of 2s. in the £.(28) In some cases the duty was calculated pro rata, as the accounts clearly indicate, but the actual rate levied varied. In others there is a discrepancy between the rate at which the account states the duty was levied and the rate which in fact was used (as calculated from the stated number of dozens and the duty paid).(29) Occasionally the accounts will provide additional information which, taken together, suggest some pattern. Where the cloth is specified as being of "equal price" the duty is levied more

often at a rate of 1s. per dozen; where the note is that the cloth is of "various prices" the rate is variable - although normally more than 1s. per dozen - suggesting that the duty was perhaps being levied ad valorem.(30)

During the sixteenth century, up until the late 1590s, there appear to be two distinct rates in force: either 1s. or 2s. 6d. per dozen. The reason for this distinction is not immediately apparent. It is possible that whilst some custumars abided by a current, updated rate of 2s. 6d per dozen, that others remained behind the times and levied an older, lower rate of 1s. per dozen. This seems unlikely for at least two reasons. Firstly, until the final years of the sixteenth century Edinburgh consistently used the lower rate, and it is unlikely that the capital city, responsible for 73 percent of the entire woollen cloth trade, could have remained out of date and allowed to continue a practice which would mean loss of revenue to the Crown.(31) Secondly, the procedure for auditing the custumars' accounts annually involved the Exchequer clerks in calculating the duty for which the custumar was liable. Thus a custumar who had levied the lower rate, if in error, would have to make up the difference from his own pocket once the account was audited, and if such a mistake occurred in one year, it was not likely to be repeated.(32)

A more credible explanation is to be found again in the additional information occasionally supplied in the accounts. Almost without exception, where the cloth is specified as "broad" cloth the duty is levied at a rate of 2s. 6d. per dozen:(33) this is confirmed

by two orders issued during the reign of James V that the custumars are to levy 2s. 6d. on each dozen of broad cloth whether dyed or not.(34) Where the exports are specifically "narrow" cloth, the rate is without exception the lower one, 1s. per dozen.(35) It is probable that where one of these two rates is applied and the width unspecified, it was obvious to merchant, custumar and auditor which size cloth was intended.

During the 1590s there is a sudden acceleration in the rate imposed per dozen, but as before, the different burghs do not seem consistent with one another. In 1595 Cupar was charging 2s. 8d. per dozen; the following year Haddington levied 10s. per dozen; and in 1598 the rate for Stirling works out at approximately 11s. 8d.(36) For just the last two years of the period Edinburgh gives its figures in ells rather than dozens, and the rate had increased from 1s. to 12s. per dozen.(37)

Many of the apparent inconsistencies are probably due, not so much to idiosyncratic custumars, but to differences in the types of cloth exported, as well as (particularly in the last decade) to increases in the rate of duty. As early as the first few years of the sixteenth century Dundee, Haddington and Linlithgow refer to cloth "of various prices, colours and widths".(38) One type of cloth which paid 1s. per dozen was cairsay (carsayis or carsais), first mentioned by Dundee in 1511, then Aberdeen in 1539, Stirling in 1555 and 1556, and Linlithgow in 1558. Not only did it pay the same rate as narrow cloth, but is also described as narrow in 1555.(39) Cairsay was mentioned by Andrew Halyburton in 1500, and by the Privy Council in

1564, but in neither of these instances is it clearly identifiable as Scottish made.(40) That this type of cloth was indeed manufactured in Scotland is, however, confirmed by a reference in 1569 to 200 ells of Galloway cairsayis.(41) English kerseys have been described as both a light cloth of narrow weave, and as a coarse, narrow fabric: whilst the Scots and English versions may not have been identical, it is probable that they were a similar type of cloth.(42)

In contrast to the well known and widely popular cairsay (or kersey), there are few details available of a cloth described as white woidis, exported from Haddington in 1590. The rate of duty paid on it was 1s. per dozen.(43) A third type of cloth in this group was kensy, mentioned once in 1599 when Dundee exported 22 dozen, paying £6 15s. This is at a rate of 6s. 2 1/2d. per dozen. Kensy in fact came in two sizes. In 1584 narrow width cost 6s. the ell, broad width 13s. 4d.(44) There are three possible explanations as to why there was this apparent sharp increase in the rate levied. Firstly, that kensy was a particularly fine, expensive type of cloth, one of Scotland's "new draperies", although if that was the case it was not prominent later on. Secondly, it appears perhaps more likely that by the 1590s the Crown was markedly more interested than previously in increased revenue through trade - the range of imports liable for duty was dramatically increased at this time - and export duty rates on cloths generally were raised. A third possibility is that kensy was not a Scottish made cloth at all, and its high rate may be indicative of a re-exported product.

A type of broadcloth manufactured in Scotland also enters the record, distinctively rated at 2s. 6d. per dozen on two or three occasions in the 16th century. Plaiding was another native product - a coarse woollen cloth, different from flannel in being tweeled, and which at one time sold for 9d. to 1s. the ell, yet by 1597 was valued at 10s. the ell.(45) From Andrew Halyburton it is quite clear that plaiding was a Scottish product, as well as in regulations found in the Acts of Parliament in the early seventeenth century.(46) By 1656 it was reported that the Scots traded only with plaiding, which found markets in Norway, Holland, France and England.(47) The Exchequer Rolls imply that demand had existed from much earlier: Aberdeen records the export of 180 dozen in 1581, paying a strange rate of something close to 1s. 9 1/2d. per dozen. In 1590 and 1592 Aberdeen again exported plaiding but at a rate of 2s. 6d.(48)

The remaining types of cloth identified in the custumars' accounts cannot easily be grouped either as broad or narrow. Kelt (kealt or kilt), was clearly a native product, homespun coarse cloth of grey, black, or mixed black and white Scottish wool, with the nap or frieze, used for making outer garments.(49) In 1577 five ells of kelt were valued at 40s., not very expensive, paying a modest rate of duty. In 1597 Dumfries exported 89 dozen at 2s. per dozen. Interestingly, Dumfries' account names three relatively unfamiliar types of cloth. A rate of 3s. per dozen was levied on a cloth identified as sky: apart from perhaps originating on the Isle of Skye there are no further clues as to what sort of cloth it was.(50) The third cloth named in the Dumfries account is steming (stenning or

stening), later known as tamine (taming). It was a fine woollen cloth, coloured black or white, made in Scotland and elsewhere.(51) In 1597 Dumfries exported steming paying duty at 3s. 4d. (1/4 merk) per dozen, and in the same year, it appeared in Andrew Halyburton's ledger as liable for an import duty of £3 per dozen.(52)

For the last two types of cloth mentioned in the custumars' accounts it is not possible to calculate the rate levied, even given the duty paid. In 1580 the account covering Crail, Anstruther and Pittenweem records the export of "certain woollen cloth called stuling". Less obscure was a cloth called seyis, sent from Cupar in 1591.(53) It resembled serge, and according to an Aberdeenshire authority was made originally by families for their own use.(54) Seyis or says were made in England also. In the first half of the seventeenth century English clothiers began to dye their cloths in the say, that is, after they had left the loom but before they were fulled.(55) Andrew Halyburton exported says to Barbary, though this cannot be positively identified as Scottish.

The actual origin of the various types of cloth is therefore a persistent problem: only rarely is there proof positive that the exported cloth was Scottish made. However, there are a number of indications that this was the case. Firstly, there occur in the accounts items specified as English cloth, and the rate levied on the re-exports was markedly higher than the norm for woollen cloth.(56) Up until the 1590s when the rates generally shot up, any re-exports that were not nominated as such would be identifiable by their high rate of duty. An English broadcloth was almost twice the length of a Scottish

dozen, perhaps three times that of a cairsay, thus easily recognisable to the custumar. Also, re-exports went primarily through Edinburgh, whereas Scottish-made cloth had a wider distribution. What we are dealing with, we can assume with some confidence, is Scotland's own cloth industry.

The bulk of woollen cloth was exported from Edinburgh, 76 percent over the whole period, followed by Dundee, Ayr, and Aberdeen, which together accounted for less than 7 percent (see Figure 3.7). The incontestable primacy of Edinburgh places severe restrictions on the use of export totals for any year in which the record for Edinburgh is deficient. Figures from these years cannot be used uncritically in analysis of short or long term trends, and will be identified in the following discussion of the period. The period of study (1460-1599) can be conveniently divided into two parts. The first consisted of a clear rise up to the peak year of 1541; the second (1542-99) began with a dramatic slump followed by recovery.

The first twenty years showed a marked and rapid increase in the volume of exports, with a peak reached in 1474 which was not equalled for another eighteen years. The trend over the period 1473-76 closely parallels that of English cloth exports.(57) By this time Scotland was playing an active role, however modest, in an international market, and was itself affected by some of the same market forces which influenced England's export figures. The period 1469-72 has to be discounted as the 1470 and '72 rolls are missing, and Edinburgh's 1471 account covers less than eight months.(58)

The decade beginning 1481 included the most serious slump in the period up to 1541; the drop and recovery of 1481 to 1483 was followed by three years in which the figures sank to the level of the early 1460s. The English figures began falling in 1483, and like the Scots they seem to have recovered by 1490. They had two good years, however, 1484 and 1486, which the Scots did not enjoy. Thereafter the export figures of both countries rose more or less steadily for another thirty years. In Scotland 1492 marked a full recovery from the preceeding slump. 1498 was another apparently exceptional year despite an outbreak of plague which lasted until 1505.(59) The poor state of the data over the next three years (1499-1501) due to the irregular dates of the Exchequer audits, reflects to some extent the disruption of central government and its inability to function normally during periods of social crisis. From 1502 however, the audits were held regularly, and continued to do so despite another outbreak of plague in 1512, and the battle of Flodden and death of James IV which followed the next year.(60) It is possible that the higher export levels of 1510 and 1511 would have been sustained without these setbacks.

The trend after this was still clearly upwards until the pattern was disrupted by a similar set of circumstances. Export levels reached a noticeable peak in 1519, at which point there was another outbreak of plague followed by complete disruption of the records for the following five years.(61) During this period England's exports fall, with a disastrous year in 1522, (62) but without reliable figures for Scotland it is difficult to draw any comparison between

the two countries. By 1525, however, export levels had recovered, and both Scotland and England experienced growth, followed by slump, before rising sharply (particularly in Scotland) to the highest levels so far, in 1541. In England the growth was irregular until 1528, declines from 1529 to 1532, a period of political conflict with the Netherlands, and then recovers in 1533 and 1534.(63) The Scottish exports grew until 1527, slumped from 1528 to 1530, and then recovered unsteadily until 1535, at which point England's figures are on the way down again. During this period Scotland was again coping with plague and all its associated disorder, including the relocation of the Exchequer from Edinburgh to Linlithgow in 1530.(64)

The record for 1536 is missing, but the upward trend is indisputable. In the previous year (1535) Scotland had exported just over 8,500 dozens of woollen cloth; by 1538 the figure had risen to nearer 11,300, exceeding the earlier peak of 1519. The highest cloth export totals of the 140 year period were reached in 1541 when exports rose to nearly 19,000 dozens. By the following year they had dropped down to a level only slightly above that of 1538, and one year later they were considerably lower than in the slump of 1530. In England the export levels also peaked in 1541, followed by two years in which they fell. Recovery followed, however, and the level reached was soon exceeded, in 1544, 1550, and 1554.(65) In Scotland it was a different story. In 1542 James V had died and the country was once again politically unstable, the Exchequer record becomes unreliable, but the decline in exports is clear. In 1544-45 Henry of England launched a series of invasions known as the "Rough Wooing", intended to persuade the Scots to ally with England rather than France. In 1545 the Court

of Session was moved from Edinburgh to Linlithgow in order to escape the latest outbreak of plague which was to linger in Scotland for a further three years.(66) In 1547 Henry was succeeded by Edward VI and England placed under the protectorate of the Earl of Somerset (formerly the Earl of Hertford) who had been responsible for carrying out the "Rough Wooing". In September of the same year the English defeated the Scots at the Battle of Pinkie, establishing garrisons in the south-east. Against this, the Scottish Queen Mother, Mary of Guise, whose family was now in power at the French court following the accession of Henry II, engineered the occupation of Scotland by the French in order to liberate it from the English. The Exchequer accounts record a drop in trade during these years, but the disrupted accounts cannot provide reliable evidence of what really happened to trade.

By 1551 normality returned to the Exchequer audits, and the custumars' accounts confirm that exports of cloth were dismally low, the worst since the late 1480s. It was four years before trade improved even to the level of the 1530s slump. The winter of 1554-5 was exceptionally hard leading to the slaughter of many animals in the Highlands and in 1556-7 famine or famine-prices were reported in many parts of Europe.(67) It may be that these two factors contributed to the higher export levels of 1555-6, as Scotland had both more raw materials to dispose of, and a need to import foodstuffs. 1558 marks another severe drop, but for the twenty four years that followed the cloth export trade enjoyed considerable if unsteady expansion. The record for the period 1560-74 is in bad order and cannot sustain detailed analysis: even the peak attained in 1574 may be misleading

due to Edinburgh's long account for that year. From then on the record improves, as do the export figures which climb steadily, with one exception, until 1582, after which the whole customs were farmed, leaving a seven year gap in the custumars' accounts.

The English cloth export trade had been under strain since before the mid-century, and despite the peak of 1554, crisis came and the market collapsed.(68) The figures for England at this point peter out, although those for London alone are adequate from 1560.(69) Some important contributing factors were not applicable to and not reflected in the Scottish market. The rehabilitation of the coinage soon after the accession of Elizabeth would have raised the cost of English cloth overseas, and dispute with the Netherlands and eventual collapse of the merchant adventurers' mart town of Antwerp caused prolonged disruption of trade, even beyond 1567 when an alternative mart was established at Hamburg.(70) In London both 1563, during which there was another outbreak of plague, and 1572, were exceptionally low exporting years, which was not the case in Scotland. There is evidence of disruption caused by plague: in 1564, when the Privy Council prohibited traffic wih Danzig where it had broken out, and in 1567 when there was plague and dearth of food in Edinburgh, persisting elsewhere for a further two years.(71) This may in part, account for the irregularly spaced Exchequer audits, although similar social stresses were present when the record improves markedly from 1575 onwards.

The London cloth figures for the last quarter of the century show greater stability than before, and modest overall growth.(72) In England, the slump of the '70s had important consequences. New markets were sought which led to the re-opening of direct trade with the Levant, there was some diversification which led to the appearance of the new draperies, and a movement towards restrictionism in an attempt to protect themselves from the results of alternation of boom and slump, through control of production. Despite this, in 1586 West Country clothiers complained that the merchants were failing to buy all their cloth, and the following year brought crisis as overproduction glutted the London cloth market and the export level dropped.(73) By the end of the century export levels from London were only slightly higher than twenty five years previously, about the same as they had been in the early 1540s.

Over the same period in Scotland the best year is 1582, followed abruptly by the seven years for which there are no figures available. When they recommence in 1590 for the final decade, some ground had been lost which was never fully regained, but it is at least arguable that this is due more to the difficulty in re-imposing the old system of accountability rather than necessarily to a fluctuation in trade. The slump followed by peak of 1581-2 may be in part explained by Edinburgh having closed off trade with Danzig and Flanders because of plague there, and then a backlog of cloth became available for shipping once restrictions were lifted. The final decade began with a three year drop to a level comparable to that in the mid-1550s. 1594 was an exceptionally good year, but the sharp decline two years later

can be at best only partially explained by Edinburgh's short account. The century ends steadily with export levels generally comparable to those reached in the mid '50s to early-60s, but far below those of the 1534-41 peak, and below even those of the late-70s and early-80s.

Over the 140 year period the cloth export trades of Scotland and England appear to have followed a surprisingly similar pattern. The peak in Scotland was reached just a few years earlier than in England, but the long climb to it, and upheaval that followed, is noticeably alike for both countries. At times one country was affected by factors which simply did not apply to the other, and certainly there are many years in which the figures for the two countries moved in opposite directions. Nevertheless, when the trends are compared overall, the similarities are clear and it is possible to conclude that Scotland's cloth trade was subject to the same or similar influences, affected by equivalent market forces, and operated in a co-extensive international and political milieu as did the cloth trade of England.

NOTES

1. See Appendix B.

2. T.C. Smout, "Coping with plague in 16th and 17th century Scotland", Scotia, ii (1978), 23, 19; Charles F. Mullett, "Plague policy in Scotland, 16th-17th centuries", Osiris, ix (1950), 436.

3. H.L. Gray, "English foreign trade from 1446-1482", in: E. Power and M.M. Postan, eds., Studies in English trade in the fifteenth century (London, 1933), 22.

4. J. Davidson and Sir Alexander Gray, The Scottish Staple at Veere: a study in the economic history of Scotland (London, 1909), 128.

5. T.C. Smout, "Coping with Plague in 16th and 17th century Scotland", 19.

6. Cambridge Economic History of Europe, iv (Cambridge, 1967), 75.

7. The Acts of the Parliaments of Scotland, eds. T. Thomson and C. Innes, (Edinburgh, 1814-75), ii, 246.

8. The Exchequer Rolls of Scotland (Edinburgh, 1878-1908), xii, 261.

9. Mullett, "Plague policy in Scotland", 437; Smout, "Coping with Plague in 16th and 17th century Scotland", 24.

10. ER, xiii, 479-493, 569-585.

11. Smout, "Coping with Plague in 16th and 17th century Scotland", 19; Mullett, "Plague policy in Scotland", 438.

12. ER, xv, 54, 67.

13. G.D. Ramsay, The Wiltshire Woollen Industry in the sixteenth and seventeenth centuries (London, 1965), 65.

14. Mullett, "Plague policy in Scotland", 438.

15. ER, xv, lv; xvi, xxxviii; The Acts of the Lords of Council in Civil Causes, eds. T. Thomson and others (Edinburgh, 1839 and 1918), iii, 332.

16. Davidson and Gray, The Scottish Staple at Veere, 162.

17. APS, ii, 375.

18. S.G.E. Lythe, The Economy of Scotland in its European setting (Edinburgh and London, 1960), 233; Davidson and Gray, The Scottish Staple at Veere, 167-9.

19. Lythe, Economy of Scotland, 16.

20. APS, ii, 496.

21. R.W.K. Hinton, The Eastland Trade and The Common Weal (Cambridge, 1959), 5; Cambridge Economic History of Europe, iv, 76.

22. Lythe, "Scottish Trade with the Baltic", in: J.K. Eastham, ed., Economic Essays in Commemoration of the Dundee School of Economics 1931-1955 (Dundee, 1955), 81-83.

23. RCRB, i, 464-465; ratified the following year, ibid., 478.

24. ER, x, 354; xxiii, 187.

25. For 1598, the published volume of the Exchequer rolls is uncertain if the duty paid was £200 or £2000, giving a rate of either £1 4s. or £12 0s. 10d. per sack: I have taken the lower figure only because it is more rounded and therefore perhaps more likely. In 1599 the rate was £6 per sack. ER, xxiii, 238.

26. There were regional variations, although attempts were made to standardise the measure in the Assise of David I (c. 1150), and in Acts of Parliament 1425, 1581, 1587, and 1685. R.E. Zupko, "The weights and measures of Scotland before the Union", Scottish Historical Review, lvi (1977), 128; J.M. Henderson, Scottish Reckonings of Time, Money, Weights and Measures, Historical Association of Scotland Pamphlet, new series, 4 (1926), 6.

27. A.L. Murray, "The Exchequer and Crown Revenue of Scotland 1437-1542" University of Edinburgh Ph.D. thesis, 1961, 143.

28. E.g. Dundee 1460, ER, vi, 587; Perth 1465, vii, 267.

29. E.g. Haddington , ER, vi, 589; Kirkcudbright 1460, vi, 83; and 1464, vii, 297.

30. E.g. Linlithgow 1478, ER, viii, 440; Irvine 1480, ix, 684; Dundee 1481, ix, 149.

31. On the other hand it could be argued that the Edinburgh merchants were indeed powerful enough to do this, to their financial advantage.

32. See Chapter One.

33. E.g. Perth 1541, ER, xvii, 292; Cupar 1557, xix, 2; Burntisland 1562, xix, 193.

34. A.L. Murray, "Exchequer and Crown Revenue", 145.

35. E.g. Wigton 1493, ER, x, 389; Dysart 1503, xii, 159; Ayr 1564, xix, 275; Stirling 1597, xxiii, 184.

36. ER, xxiii, 87, 128, 242.

37. ER, xxiii, 238, 336.

38. ER, xi, 365, 366, 369; xii, 81. The English customs accounts distinguish three or four different qualities of woollen cloth according to colour: "in grain", "in part grain", or "without grain",

grain being the name of very expensive scarlet dye. Cloth described as panni sine grano was cloth with no grain at all, and formed by far the greatest part of English woollen cloth exports, but it did not mean it was undyed, indeed it came in a variety of colours, including white. E.M. Carus-Wilson and O. Coleman, England's Export Trade 1275-1547 (Oxford, 1963), 14.

39. ER, xiii, 385; xvii, 181-2; xviii, 280, 333; xix, 33.

40. The Ledger of Andrew Halyburton, Conservator...in the Netherlands, ed. C. Innes (Edinburgh, 1867), 264; The Register of the Privy Council of Scotland, ed. J.H. Burton et al. (Edinburgh, 1877), i, 308. The cairsay under discussion in 1564 was of different colours and varying lengths: 3 green cairsayis, totalling 45 ells; 11 blue, 143 ells; 1 steik of red, 15 ells; and 2 steiks of white, 32 ells. See also H.L. Gray, "English Foreign Trade", 8.

41. Dictionary of the Older Scottish Tongue, Galloway; Edin. Tests., i, 250b.

42. Carus-Wilson and Coleman, England's Export Trade, 14; Ramsay, The Wiltshire Woollen Industry, 19.

43. ER, xxii, 93; xxiii, 335.

44. Dictionary of the Older Scottish Tongue, kensy.

45. Etymological Dictionary of the Scottish Language, plaiding; The Ledger of Andrew Halyburton, Appendix, cxiv. Jamieson's Dictionary of the Scottish Language, plaiden, "it would appear that this stuff was anciently worn parti-coloured in Scotland like what is now called tartan."

46. The Ledger of Andrew Halyburton, xcvi; APS, v, 105a, 414, 597b; vii, 185b.

47. Thomas Tucker, Report Upon the Settlement of the Revenues of Excise and Customs in Scotland 1656, Bannatyne Club (Edinburgh, 1825), 44.

48. ER, xxi; xxii.

49. Dictionary of the Older Scottish Tongue, Etymological Dictionary of the Scottish Language, Scottish National Dictionary.

50. RPC, ii, 646; ER, xxiii, 182.

51. Etymological Dictionary of the Scottish Language, steming; APS, iv, 669b; RPC, i, 308.

52. ER, xxiii, 182; The Ledger of Andrew Halyburton, Appendix, cxiii.

53. ER, xxi, 3; xxii, 170.

54. Scottish National Dictionary, seyis.

55. W.B. Stephens, 17th Century Exeter (1958), 10; Ramsay, The Wiltshire Woollen Industry, 104.

56. E.g. ER, xii, 86, 471.

57. See Appendix C.

58. See Figure 3.5.a.

59. Smout, "Coping with Plague in 16th and 17th century Scotland", 19.

60. Ibid., 19; Mullett, "Plague Policy in Scotland", 435-456.

61. In 1520, '21 and '22 Edinburgh's accounts are not itemised and so there are no figures given for woollen cloth exports.

62. Carus-Wilson and Coleman, England's Trade Exports, 115.

63. Ibid., 116-117.

64. Smout, "Coping with Plague in 16th and 17th century Scotland", 19; Mullett, "Plague policy in Scotland", 438; ER xvi, 1-43; A Diurnal of remarkable occurrents that have passed within the country of Scotland, Bannatyne Club, (Edinburgh, 1833), 14.

65. Carus-Wilson and Coleman, England's Trade Exports, 118-119; J. Gould, The Great Debasement (Oxford, 1970), 173-7.

66. G. Donaldson, Scotland: James V - James VII, (Edinburgh, 1978), 27; Smout, "Coping with Plague in 16th and 17th century Scotland", 24.

67. S.G.E. Lythe, The Economy of Scotland, 123; C.E.H.E. iv, 76; Hinton, The Eastland Trade and the Common Weal, 5.

68. Ramsay, The Wiltshire Woollen Industry, 65-66.

69. These are in triennial averages.

70. Ramsay, The Wiltshire Woollen Industry, 66-67.

71. F.J. Fisher, "Commercial Trends and Policyin 16th Century England", in: E.M. Carus-Wilson, ed., Essays in Economic History, (London, 1954), 153; C. Morris, "The Plague in Britain", The Historical Journal, xiv (1971), 205; Smout, "Coping with Plague in 16th and 17th century Scotland", 24; Lythe, The Economy of Scotland, 17.

72. Fisher, "Commercial Trends", 153.

73. Ibid., 162, 163, 164-6; Ramsay, The Wiltshire Woollen Industry, 67.

Chapter Four

Skins

INTRODUCTION

This chapter deals with a group of Scottish export commoditie closely related to those in Chapter Three. Overseas sales of animal skins was unusually widespread throughout the burghs, particularly so with hides, and especially during the first half century (Figure 4.7).(1) They have been categorised into three main groups: fells, hides and skins; and skins has been further sub-divided, which is how they are identified in the custumars' accounts. As a group the animal skins make the second largest contribution to the Exchequer, after wool and woollen cloth.(2) All the fells and most of the skins were from sheep or lambs. Considering that this large proportion of the customs revenue was generated after having supplied the home market and fed it, the importance of sheep within the Scottish economy is clear. If Scottish sheep were small and inferior to English sheep and yet managed to do so much for the Scots, one wonders how much more prosperous might Scotland have been if the sheep had been large with luxiuriant and good quality fleeces?(3)

From the amount of revenue generated, we know that the export of fells was many times more valuable than that of hides, which in turn was two or three times more valuable than all the different groups of skins put together (Figure 4.44). "Fells" were the skins of adult sheep, killed six months after shearing and so having some quantity of wool on them. "Hides" were skins of animals without wool or fur, that is, mainly cattle.(4) The group "skins" is a collection of many

different animal skins which together generated far less revenue than the other two groups, despite their large numbers. But they provide insight into the nice distinctions the sixteenth-century Scots could make between seven different types of sheep or lambskins, and the wide range of furs from so many different animals that could be made available for export, if need be.

Fells, hides and skins were sold in Bruges in the fifteenth century in large quantities, exported chiefly from Edinburgh, and well into the second half of the sixteenth century Scottish fells were still being sold in the Netherlands forming part of the trading agreement between the merchants of Veere and Scotland drawn up in 1578.(5) When Guicciardini wrote about Scottish trade with Antwerp c. 1560, he mentioned that great numbers of sheep and rabbit skins were imported, plus many hides, and other kinds of pelts including the most beautiful martin skins. This is interesting, for according to the custumars' accounts exports of rabbitskins were negligble - less than 4000 skins per year, if any at all - until, 1598, and between 1460 and 1599 the export of martin skins was recorded once only, from Dunbar in 1491.(6)

In France the footwear trade in the north and some skilled clothing manufacturers were interested in buying Scottish cured skins and hides. England also imported Scottish skins, favouring goat and kid skins which by the end of the sixteenth century were still very small (Figures 4.40 and 4.42: kid skins are in the group "other skins").(7) The most important market for Scotland's animal skins was the Baltic. We are fortunate in having available the work of S.G.E.

Lythe, which will allow a comparison of annual average totals leaving Scotland with those passing eastward through the Sound. It is important to compare like with like, and Lythe has followed the editors of the Sound Toll Tables in making one total for fells, hides and skins combined.(8) From 1574 until 1579 80 percent of all combined skins exports from Scotland went to the Baltic; 1580-1583, it was 70 percent; and during the '90s had dropped to just over 45 percent. From Professor Lythe's figures we know that the Baltic market was contracting (and continued to do so until the 1620s), and Figures 4.11 and 4.9.a indicate that of the top skins-exporting burghs, Dundee was the one which suffered a sharp decline of trade in this commodity. However, Dundee alone did not account for the drop in trade with the Baltic, and it appears tht the Scots were finding new markets or expanding existing ones elsewhere.(9)

FELLS

Fells were reckoned singly, paying a constant rate of duty throughout the period of 13s. 4d per long hundred.(10) The export of fells expanded steadily, the only long breaks in the graph occurring when the record deteriorated. The mid-century boom peaked in 1539 followed by the 1540s slump, but trade had recovered well by the mid-1550s. So far as the record allows us to judge, woolfells continued to do well until the late 1590s. Then in 1597 and 1598 the annual totals shot up from around 110,000 in the previous few years to over 250,000. The shape of the graph for woolfells (Figure 4.1) is something like the reverse of that for wool (Figure 3.1). This may be evidence of attempts to circumvent repeated legislation prohibiting the export of wool, by taking it out of the country as a legally exportable commodity: a woolfell. However, this legislation was not promulgated until well into the sixteenth century (see Chapter Three), when the wool trade was already in severe decline, so that any correlation between these two sets of figures must also involve other factors.

Fells generated the second highest amount of revenue, after wool, £52,593 out of a total £416,352 over 140 years (wool, £149,363). Only in the 1590s did woollen cloth revenue finally overtake fells, and by that time the wool trade was a fifth of the size it had been in the 1470s (Figure 6.4).

The growth of trade in woolfells in fact was due more or less to Edinburgh alone, and this became increasingly the case over time. Three burghs accounted for over 93 percent of the total trade over the period namely Edinburgh, Dundee, and Aberdeen.(11) The difference in contribution, however, between the first, Edinburgh, and any of the others is remarkable (Figure 4.3). Edinburgh alone accounted for over 70 percent of the total export in woolfells during the 140 years. Dundee, in second place, took 8 percent, and Aberdeen, 6 percent. A comparison of Figures 4.1 and 4.3 suggests that the shape of the woolfells trade was more or less that of Edinburgh alone. Both show a rise to the 1530s followed by contraction in the 1540s, then another sharp climb to the end of the century. The sharp drop at the beginning of the 1520s, as shown in Figure 4.1, was due to the state of the record, principally to Edinburgh not rendering an itemised account (Figure 3.1.a).

Other burghs did rather better for a time, 1490-1510, and were less badly affected during the 1540s when Edinburgh's figures dropped sharply. During the 1570s and 1580s Aberdeen's share increased to almost 11 percent of the total, when Dundee had 5 percent rising to nearly 8 percent. At the same time Edinburgh took 75 percent, and over 80 percent in the 1590s.

HIDES

Hides were reckoned in lasts and dacres, ten hides to the dacre and twenty dacres to a last.(12) Figure 4.5 shows that over the period the export of hides increased gently until the middle of the sixteenth century, peaked in 1556, and then so far as the record shows stabilised at a level about the same as at the beginning of the century, that is higher than in the 1460s. The shape of the graph is similar in many ways to that of woollen cloth exports (Figure 3.5). That the revenue graph (Figure 4.6) repeats the pattern almost exactly tells us that the rate of duty on hides remained constant over the 140 years, 2s 8d per dacre or £2 13s 4d per last.(13) Closer analysis of the violent peaks and troughs which characterise the hides annual export figures is dealt with later.(14)

Figures 4.7 and 4.8 show that the export of hides from Scotland may have been expanding overall for almost a century (1460-1556), but that from the 1520s the hides trade from every other burgh contracted whilst that from Edinburgh shot up. Over the whole period Edinburgh accounted for 63 percent of all hides exports: this grew from 28 percent in the 1460s to 83 percent by the 1590s. Dundee exported 7 percent overall, and Ayr less than 5 percent. It was a staple trade, one in which a large number of burghs participated, hence the high contribution from "Other burghs". A number of them were making a sizeable contribution during the 1460s, but their trade slumped so badly that overall their share was tiny. Linlithgow had almost 12

percent of the hides trade initially, but only 2 percent over the whole period; Inverness, 10 percent and less than 1 percent; Kirkcudbright, 8 percent and 1 percent. For Dumbarton, Aberdeen and Stirling, the picture was similar.

This dominance of Edinburgh is interesting. Hides were a staple commodity, in that they had always entered the economy as sellable items whenever farm animals - reared for work or for meat, not for their hide - died. Given the nature of the economy, there was not likely to have been a lack of supplies of hides from all parts of Scotland. It was a constant difficulty to keep animals alive over the winter, from December to April there was little or no food for them. Many animals were slaughtered for their meat, or were sold at market before the cold weather began, before the animals deteriorated.(15) Probably what was happening was a change of practice, whereby hides exports from all over were increasingly channelled through Edinburgh, rather than being sent direct from the smaller burghs. It is another indication of the increasing dominance of the capital in Scottish commercial life.

SKINS

The importance of sheep in the lives of the Scots is demonstrated once again in the group of exports classed as "skins". The skins of dead sheep, or in many cases lambs, form all the main groups of skins as well as some minor ones, categorised according to when or how they died. These are in addition to the exports of woolfells which were greater in both volume and value than all the skins groups put together. Over the whole period, of the four main groups - lambskins, schorlings, futefells and scaldings - lambskins not only were the strongest numerically but also generated the most revenue (Figures 4.23, 4.24, 4.13 and 4.14). This, even though the rate per long hundred, 1s 8d, was a quarter of that for schorlings, the next largest group.(16) Edinburgh, Aberdeen and Dundee were the main exporting burghs, although from 1570 shipments from Dundee declined even though lambskins from everywhere else were rapidly increasing (Figures 4.25 and 4.26).

Schorlings and scaldings, like fells, were the skins of adult sheep. Schorlings were from animals killed immediately after shearing, and so differed in appearance from fells in having very short wool, whereas that on the fells would have had time to grow between shearing and slaughter.(17) Consequently schorlings paid a rate of duty half that of fells, 6s 8d per long hundred.(18) Edinburgh, Dundee and Perth were the main burghs involved: however, from a peak at the end of the fifteenth century Edinburgh's exports of schorlings declined to

negligble amounts through to the end of the period.(19) Scaldings were the skins of sheep which had died of scab, and have been described as a type of dressed skin, meaning perhaps that they were treated in some way in order to deal with the scab.(20) So their peaks of export could be interpreted as peaks of sheep disease. The rate of duty remained the same for the whole period, as with most of the other skin groups, scaldings paid 3s 4d per long hundred.(21) Inverkeithing, Perth and Edinburgh were the main burghs, perhaps an indication of where and when scab was most troublesome. Edinburgh ceased trading in scaldings altogether at the end of the fifteenth century. Perth did not begin until the 1570s, had a huge trade for about a decade - although the break in the records at 1583 makes it difficult to know exactly for how long - then dropped to nothing (Figures 4.19 to 4.22).

The fourth large group of skins were futefells, from lambs that had died within a year of birth, or, more specifically according to one source, during the time between castration and weaning.(22) It is not clear how else they were distinguished from lambskins other than that they paid twice the duty, 3s 4d per long hundred.(23) The rates o duty were based upon the amount of wool on the fleece, so if futefells contained more wool than lambskins then they may have come from an older, and therefore larger, animal. The chief burghs involved were Edinburgh, Dundee and Haddington (Figures 4.29 and 4.30). One of the smaller groups of skins was lentrinware, another type of lambskin this time from a still born lamb. It took its name from the time of year the skins became available, springtime, during lent, and were common only in the fifteenth and sixteenth centuries. Their value was considered half that of futefells, and they paid half as much duty, 1s

8d per long hundred the same as ordinary lambskins.(24)

There are over twenty more types of skins mentioned in the custumars' accounts during the period. In some accounts two or more skins were listed together with one amount of duty covering both, such as that for Inverness, Ross, Sutherland and Caithness in 1542 which put goatskins in with the lentrinware. Dundee exported sixty goatskins in 1546 paying 10d duty, so the rate was 1s 8d per long hundred the same as for lentrinware and lambskins. Calfskins were exported from Edinburgh paying just over 9d per long hundred, the lowest rate recorded in the period.(25)

Scaws and mortwells made one appearance at Inverkeithing in 1533; calabar-skin went from Edinburgh twice in the 1550s, but all we know of it is that it was a skin with fur on it rather than hair or wool.(26) Edinburgh exported "wild leather" mainly in the 1580s and '90's, but "hides of wild animals" once in 1556. Also occasional amounts of red skins and deer skins show up, but for many of the smaller groups the rate of duty is not known. An interesting entry appears in Edinburgh's account for 1542, 2340 bear skins paying £3 5s duty, that is 3s 4d per long hundred, the same as scaldings and futefells.(27) This is so improbable that it must be a misreading, perhaps of deerskins. Other burghs had some interesting items: winterskins from Inverkeithing in 1572, martinskins from Dunbar, 1491, kidskins in 1580 from Dundee paying the next lowest rate after calfskins of 10d per long hundred. Rabbitskins appeared only occasionally until the mid-1590s, and then a bumper year in 1598. Like lentrinware and lambskins they paid 1s 8d per long hundred.(28)

Exports of whiteskins began in the 1550s and increased steadily til the end of the century. They were called white because the fleece had no tar left on it, the sheep having been shorn "twice white". Despite this refinement they paid only 3s 4d per long hundred. In 1570 the Convention of Royal Burghs intervened over a matter of quality control. There had been complaints from the merchants from Flanders, France and other places that the Scottish skins and hides they bought had had tarred parts of the fleece cut away, perhaps a fraudulent attempt to pass them off as as whiteskins. Worse, large parts of the fine wool had been lost during the trimming, in fact deliberately stolen. This was intolerable for the buyer and earned the Scots a bad reputation. It was to be proclaimed in every burgh that all skins and hides brought in to be sold at market were to have the skin and burned on tar left alone. If they were tampered with they would be escheat and given either to the common good or to the poor, and claiming ignorance of the new regulation would not excuse punishment.(29)

Many of the more unusual skins passed through Edinburgh, and the greatest variety appeared in the last decade. Todskins or foxskins, paying £1 per long hundred in 1590; sealskins even higher, £1 4s. There were marikin skins, a variety of leather made from goat skin in a style that originated in Morrocco, hence a corruption of "morrocco-skin". Otterskins went out mainly from Edinburgh in the '90s, although Dysart exported twenty four otterskins in 1554, paying 4s duty which is £1 per long hundred. In 1592, '97 and '98 the rate had gone up to £1 10s.(30) Stirling exported fox-skins in 1592, duty

levied at about £1 as in Edinburgh, and in 1598 five "dried" skins which paid 1s 3d, that is £1 10s per long hundred.(31)

MARKET FORCES

The groups of commodities dealt with in this chapter - fells, hides and the various types of skins - have very differently shaped graphs, indeed no two are alike. However, in studying their peaks and troughs particular years reappear over and over in the different graphs.

The figures indicate that the level of exports of skins was flexible in the short term, that sharply increased quantities could be made available at short notice but that a sudden rise could not be sustained beyond one or possibly two years. Hides and fells were less responsive and to some extent moved independently, producing very different-looking graphs. Yet on occasions they show close conformity with the movements of some of the groups of skins.

Early on in the period the level of skins exports rose to a minor peak in 1474 and then stabilised at a rather higher level than previously. Of the four main skin types, this 1474 peak shows up on only one, scaldings. In fact there were more scaldings exported that year than there were schorlings, one of the other main groups, but schorlings still generated considerably more revenue because they paid a higher rate of duty per skin.

The winter of 1554-1555 was exceptionally severe and proved fatal to large numbers of horses, cattle, sheep and goats, particularly in the highlands.(32) The total of exported skins that year was higher than usual, over 90,000 rather than about 30,000 in previous years. We also know from Figure 4.23 that lambskins peaked that year, in fact they accounted for 70,000 of the total 90,000 skins. Furthermore, Figure 4.12 shows that in 1555 the burghs exporting the most skins were Aberdeen and the little burghs, whilst Edinburgh and Dundee took a reduced share.

The severe weather was not restricted to Scotland, crops were poor over wide areas of Europe and from 1556 there were reports of famine or famine prices for two more years.(33) In these circumstances it was usual for the Scots to import Baltic grain, although with widespread shortages they would have been in competition with European neighbours. By 1556 Scotland had to take on the cost of paying for extra-ordinary imports of grain, with the task of avoiding a trade deficit made perhaps a little more difficult by a prohibition on exports to England the previous year.(34) The cost of the Baltic grain could not be made up by additional exports of skins, either, because the animals had died and their skins sold the previous year. In the circumstances it is unlikely that stocks already would have been rebuilt. At this point, in 1556, the export level of hides hit its highest peak of the whole period, generating an income if £650 in that one year.

In 1574 food was again scarce and when available it was highly priced. At the same time there were further outbreaks of plague.(35) In 1575 grain shipments from the Baltic were the highest that decade, greater than the highest year in the 1560s for all grains except wheat and flour. During the period 1574-1578 twenty five percent of Scottish ships which entered the Baltic were unladen compared with seven per cent for the years 1562-1569, and the annual average of grain moving west was more than doubled.

All the groups of skins except rabbitskins show a clear peak in 1576, for some (futefells, lambskins and schorlings) it was the highest annual total of the whole period. It was followed by an equally uniform slump in 1577. If the increased numbers of exported skins during that one particular year was an effort to pay for grain imports, then some interesting questions arise. If the grain was imported to relieve shortages in 1574 then Scotland was paying for it up to two years later, and not completing the year's trading balance at the end of each year.

During the 1590s, in similar circumstances, the same patterns can be seen again in the exports of skins. In 1594 there was bad weather during harvest time, and widespread food shortages (as in France and England) which lasted until 1598. From 1595 efforts were made to increase imports of grain, peaking in 1597.(36) Exports of lambskins and whiteskins rose in 1594 then dropped back again; in 1597 exports of hides went up, only to fall the following year, and fells managed to remain high for two consecutive years, 1597 and '98, only to bottom

out in 1599. 1598 was clearly a critical year during which most of the skins groups peaked (including a sudden and unprecedented number of rabbitskins), only to slump in 1599, presumably because there was far fewer animals left alive.

In general, it could be said of the Scottish trade in fells, hides and skins that it was a make-weight, important as a supplement to other trades but hardly capable of producing many cargoes on its own. It also lacked elasticity, because animal skins were essentially the by-product of some other husbandry purpose, and their production was always limited by the constraints hedging that main purpose. To find products capable of sustained expansion when the market for animal products faltered, we must look to fishing (Chapter Five) and to the coal and salt trades (Chapter Six).

NOTES

1. Number 4 "Other burghs" is high: this means that after Edinburgh, if the "Other burghs" together total considerably more than the second and third - Dundee and Ayr - but each one is contributing smaller amounts, then it must involve a large number of them.

2. See Figure 7.5.

3. At a Scottish Historical Conference held at Dundee in 1981, Mr. Richard Stephenson delivered a paper on Scottish overseas trade in the middle ages, stating inter alia that there had occurred in the course of the middle ages a catastrophic decline in the quality of Scottish wool, so that from being at the end of the 13th century on of the most highly prized of European wools, it became by the 15th century one of the least regarded. Certainly in the late 17th century the poor quality of Scottish wool was related to the need to tar the animals as a protection against blow fly. Was the deterioration a function of a new threat to sheep - the blow fly - occurring in the course of the late middle ages?

4. Plus horses, pigs and oxen.

5. Rooseboom, The Scottish Staple in the Netherlands (The Hague, 1910), 99; J. Davidson and Sir Alexander Gray, The Scottish Staple at Veere: a study in the economic history of Scotland (London, 1909), 130.

6. S.G.E. Lythe, The Economy of Scotland in its European setting (Edinburgh and London, 1960), 237. The Exchequer Rolls of Scotland, vi-xxiv (Edinburgh, 1878-1908), x, 305.

7. Lythe, Economy of Scotland, 183, 220.

8. S.G.E. Lythe, "Scottish trade with the Baltic 1550-1650", in: J.K. Eastham, ed., Economic Essays in Commemoration of the Dundee School of Economics 1931-1955 (Dundee, 1955), 74.

9. See also "Herring", Chapter Five. Figures for the 1560s present some problems, as Professor Lythe has more skins arriving in the Baltic than the Exchequer rolls have leaving Scotland. Figure 4.9.a shows clearly that during the relevant years, 1562-69, the custumars' accounts are in a poor state. On the one hand, this demonstrates the dangers of placin g too much reliance on a single source such as the Exchequer rolls, but on the other hand, the methods used in this thesis not only utilise the records to pinpoint the unreliable years in our period, but also provide a mass of detailed information.

10. ER, viii, 385; xii, 167; xix, 273.

11. Figure 3.1.a.

12. Athol Murray was mistaken in counting twelve hides to the dacre as in his thesis, page 144, but correct in his article "The Customs Accounts of Kirkcudbright". T.C. Smout counts 200 skins per last of cattle hides in the seventeenth century in his thesis, page 119.

Please see bibliography for full references.

13. ER, vii, 30; xii, 84.

14. See this chapter, "Market Forces".

15. T.C. Smout, A History of the Scottish People, 1560-1830 (London, 1972), 122-123.

16. ER, xvi, 60.

17. My thanks to Dr. Ian Blanchard, Department of Economic History, University of Edinburgh, for this and much of the following detailed information on skin types.

18. ER, viii, 355; xii, 367; xiv, 266.

19. Figures 4.17 and 4.18.

20. Etymological Dictionary of the Scottish Language.

21. ER, viii, 250, 540; ix, 338; xii, 261. Another type of skin was morlings, from sheep found dead from murraine. No morlings at all appear in the custumars' accounts during the period: this may mean Scotland was free of the disease, or more likely, it was simply not a term which was known in the Book of Duties.

22. G. Watson, Roxburghshire Word Book (1923), cited in Dictionary of the Older Scottish Tongue.

23. ER, viii, 310, 312; xi, 267.

24. Dictionary of the Older Scottish Tongue; ER, viii,253; viii, 314.

25. ER, xvii, 461; xviii, 86; xiii, 442.

26. ER, xvii, 302, 461; xviii, 119, 198; Dictionary of the Older Scottish Tongue.

27. ER, xvii, 464.

28. ER, xx, 97; x, 305; xxi, 4; viii, 459.

29. ER, xviii, 173; Scottish National Dictionary, Records of the Convention of Royal Burghs 1295-1597, ed., J.D. Marwick (Edinburgh, 1866), i, 21-22.

30. ER, xviii, 261; xxii, 248-9; xxiii, 187, 238-9; Etymological Dictionary of the Scottish Language; ER, xxii, 91, 170-1.

31. ER, xxii, 169; xxiii, 242.

32. S.G.E. Lythe, Economy of Scotland, 16.

33. R.W.K. Hinton, The Eastland Trade and the Common Weal (Cambridge, 1959), 5; Cambridge Economic History of Europe, iv, 76.

34. Acts of the Parliaments of Scotland, eds., T. Thomson and C. Innes

(Edinburgh, 1844), ii, 496.

35. S.G.E. Lythe, "Scottish Trade with the Baltic", 72; Lythe, Economy of Scotland, 9; T.C. Smout, "Coping with Plague in Sixteenth century Scotland", Scotia, ii (1978), 19.

36. Lythe, Economy of Scotland, 14, 21.

Chapter Five

FISH

INTRODUCTION

As Michell has explained, the European fisheries operated at four levels with many fishermen participating from quite outside the market economy. Firstly, all around the coast people went out in small boats to catch what they could to supplement their own diet. One above this subsistence level of fishing was an inshore trade, carried out in small boats, and dealing solely with fresh fish immediately sold to local markets. A third level was oriented towards fish species that involved seasonal catches rather than steady availability. This required some form of preserving fish, as when in season there were more fish caught than could immediately be consumed. The organisation necessary brought with it the intervention of merchants, fish fairs, and those of other occupations whose work kept the industry going, such as coopers or packers, and it often involved export of the surplus. The top level fisheries worked entirely on a commercial basis and were completely market-orientated; internationally, the most pre-eminent among these was the Dutch herring industry.(1)

Fishing in Scotland ranged over all these categories, but it was only from the royal burghs that any fish could be exported. This is the only part of Scottish fishing that is examined here, but it represents only a proportion of the total fish catch, the remainder being consumed by the home market. The fish represented in the export records was derived from the surplus of the preserved seasonal supply and the commercial, market-orientated fisheries. The items of fish

exports in the custumars' accounts have been categorised into three groups: salmon; herring (which includes codling as they were reckoned in the same way, frequently packed in the same barrels, and presumably paid comparable rates); and cod, which for these figures includes all the other types of fish mentioned occasionally in the accounts, such as liny or saithe, details of which are given below.

SALMON

Most profitable to the crown was the salmon trade, which generated £35,000 over the period, followed by herring, £21,000 and cod, less than £5,000. Unlike herring, salted salmon had no Europe-wide industry which could provide a context for Scotland's exports. Michell, writing on the European fisheries, scarcely mentions salmon at all, and indicates that apart from Scotland the only other area where salmon were exploited was the Baltic, and there they were of no commercial significance.(2) Information on the Scots salmon fishery can be gained from a study of the legislation seeking to control it. The Convention of Royal Burghs and Parliament between them sought to regulate the industry, but with varying priorities.

It was recognised that the salmon population required protection and a close-season was imposed lasting from the Feast of the Assumption (15 August) until that of St Andrew (30 November). Punishments for killing salmon at the forbidden time were harsh. In 1400 it was £5 fine for a first offence but capital punishment on a third conviction, and in 1503 Parliament decided that these penalties should be made even more severe. There were attempts to crack down on the number of people claiming exemption who were henceforth to produce documentary evidence of it before the King and Council.(3) Additional legislation paid particular attention to the salmon-fry. They were not to be taken from mid-April until the feast of St John the Baptist, and during the "smolt time" boats and fishing gear which would hinder

their passage to the sea were prohibited.(4)

The trading privileges of the free burghs applied to salmon and other fish. Fishermen were to sell their catches only to free merchants.(5) National policy was not always necessarily weighted in favour of the merchants. Frequent attempts were made to enforce the import of bullion in proportion to the amount of staple goods exported: in 1484 merchants were to bring in four ounces of burnt silver for each last of salmon sent out. During food shortages they could be required to sell salted fish for domestic consumption only.(6) In the later fifteenth century it was believed to be in the national interest to support the manufacture of cloth, so the import of English cloth was forbidden even if in return for Scottish exports of salmon or other fish.(7)

The amount of detailed legislation regarding the fisheries is a demonstration of the interest and importance attached to them by government. It may also suggest the difficulties they encountered in enforcing the regulations, as for instance with their repeated efforts to standardise the size of the barrels. Salmon were to be packed in barrels of Hamburg measure, specified in 1478 as fourteen gallons, and each burgh was to have three hoop irons for measuring them.(8) In 1540 another Act of Parliament ordered a standard measure to be made for salmon, herring and keling barrels for use throughout the kingdom. Coopers were to mark each barrel they made with their own iron, as was the burgh where the fish were packed into it.(9)

At the Convention of Royal Burghs in St Andrews, January 1571, the subject of barrel sizes was dealt with again. The salmon barrel was now to contain twelve gallons, and the duty of the cooper to mark the barrels with his own burning iron was repeated, that he might be answerable for them.(10) Two years later an Act of Parliament stated again that the salmon barrel was fixed at twelve gallons "of the Stirling pint".(11)

In 1579 the Convention of Royal Burghs passed another statute in the name of all the commissioners that the provosts and bailies from every burgh where salmon, keling or any other fish were packed, check diligently that the barrels were of just measure and had been burnt or marked in some way with the name of their burgh. Fish that was to be salted "was to be well and sufficiently salted", and each burgh should appoint its own inspectors. The following year the commissioners repeated and confirmed it all yet again: the inspectors must be diligent, the salmon bind was to be universal through the whole realm, and each barrel to contain twelve gallons.(12) Three years later parliament ratified previous legislation and ordered a just measure and standard for salmon be kept at Aberdeen, and each burgh have a copy of it.(13)

The subject was reopened in 1595 by the Convention of Royal Burghs. "Upon earnest suit" the gauge for herring, white fish and salmon - the hogshead - was to be reduced from eighteen to fifteen gallons, the reason given being a scarcity of timber. Coopers were to make them of fifteen gallons, or at least fourteen and a half gallons,

the barrel measuring half a hogshead i.e. seven and a half gallons (meaning a minimum of seven and a quarter).(14) Despite all these efforts throughout the period it seems that uniformity remained unachievable. In 1598 five burghs were named especially as being guilty of the greatest differences, and so it continued into the seventeenth century.(15)

Other areas of the industry received parliamentary attention. Fish were not to be sold for packing and peiling except between 11am and 2pm, the price being fixed each market day by the provost or magistrates of the burgh.(16) The Convention of Royal Burghs was also interested in quality control, as shown by their concern, shown in 1579, that the fish be well salted. The following year they pronounced in considerable detail on the intolerable bad practices of packing short weight barrels of roustie fish, and the packers in each burgh were to swear that in future they would pack only good fish, full weight, and no grilses in with the salmon, or at most not more than six per barrel.(17) The packer was to be liable for any merchants' loss through bad packing, and so he too must add his identification mark to the barrel. Upon conviction of malpractice he was also subject to £10 fine and permanent loss of job.(18) Clearly the Convention hoped to deter.

Once packed and sold the barrels were subject to duty before export. From the 1460s the rate was 3s per barrel of salmon (grilse 1s 6d) until 1481 when it was increased to 4s, that is, £2 8s per last. In 1598 the duty was raised again, to £22 10s per last, an increase of almost 1000 percent (Figure 5.2).(19) In 1586 the royal

burghs imposed an export levy on certain goods, including 4s per tun of salmon, to pay the expenses for a commission to go to Flanders and England with letters asking for a reversal of the recent decision to ban fish imports to Flanders.(20) This was distinct from and additional to the regular customs duties. Flanders had provided a market for Scottish salmon since the fifteenth century. In 1484 the King embarrassed the burgesses of Aberdeen by requesting twelve lasts of Aberdeen salmon, which they could not provide as the year's catch had already been sold and exported to Flanders and other places.(21)

In 1540 a contract was drawn up between the cities of Antwerp and Edinburgh, and the Scots' freedom to sell their varieties of salted fish was made explicit, subject only to inspection by Antwerp police, commomly called the Cure Masters of Fish.(22) However the main market for Scottish salmon was probably France. In the account book of the merchant David Wedderburne most entries relating to salmon refer to France as their destination. In 1548 John Barton wished to disguise his ship as an innocent Scots trader so he sailed to France with a typical Scots cargo of salmon and skins. The records contain a number of references which confirm that this trade was flourishing.(23)

Beginning slowly, throughout almost the whole of the period England imported all three main groups of Scottish fish: salmon, herring and cod. By the mid-sixteenth century entire ship loads were not unknown. Reference has already been made to the Scots' ban on imports of English cloth. This was not intended to thwart the export of Scottish fish but rather to facilitate the import of English currency, whilst protecting home cloth manufacture.(24) A major market

for Scottish fish was the Baltic, which took mainly herring, with very little salmon and cod until the 1590s when the other two together reached about thirty or forty lasts a year. By 1640 they either dwindled to nothing or became subsumed under "herring".(25)

Over the first century of our investigation there appears to have been three boom periods set against a fairly steadily rising trend. These were from around 1475 until 1482, from 1538 to 1542, and from 1556 to 1558. The outstanding year of the whole period was 1539, when salmon export levels reached over 500 lasts. The next highest years, 1541 and 1556, saw exports at about 400 lasts. Disregarding the booms, there was a steady increase from nothing in the 1460s to around 200 lasts by 1560. In the last forty years of the period the course of events is obscured by the more variable quality of the record, but even so there is a general decline in the trend (Back to about 100 lasts by the 1590s), and peak years such as 1582 are markedly lower than before.

Aberdeen, the top exporting burgh, took 42 percent of the salmon trade over the whole period, and apart from the 1460s and 1560s when its share was nil, it maintained a steady level throughout of between 35 and 55 percent. Dundee was also fairly steady taking 13 percent overall, and making its largest contribution from the 1510s to 1530s when it rose to just under one-fifth of the whole. Edinburgh was ranked third, being rather slower than usual to get a major share of the trade, taking 8 percent of the whole but rising from 1 percent in the 1480s to almost a quarter by the 1590s, the quantity of salmon shipped from Edinburgh in the '90s not being so much greater than it

had been in the '80s, but its share increased because total salmon exports had dropped. The "other burghs" which made such a large contribution to salmon exports were principally Perth and Montrose, followed by Moray, Banff and Inverness.

HERRING

Salted herring were exported from Scotland in barrels, perhaps 1200 - 1320 fish per barrel, twelve of which made a last.(26) In 1423 James I set the rates of duty as follows: fresh herring, 1d per thousand (= 1200 = 1 barrel); salted herring in barrels exported by Scotsmen, 4d per barrel; the same exported by foreigners, 6d per barrel; and red herring cured in Scotland, 4d per barrel.(27) Within the period discussed in this thesis, herring exports first appeared in 1468 and to begin with generally seemed to pay a rate of 6d per barrel.(28) This may indicate that foreign merchants handled the trade, but when the rate was increased by proclamation in 1482 from 6d to 1s per barrel, no distinction was then made between Scot and non-Scot.(29) The ruling of James I was presumably no longer in effect at this time. This rate of duty remained in effect through to the end of the sixteenth century.

Unless cured, herring would deteriorate to a point beyond human comsumption within 24-48 hours. Prime herring fishing grounds were around the British Isles, and so the English, Irish and Scottish fisheries could land their catch each morning and leave all the curing and barrelling to be done on shore, thus managing with small boats. Fisheries from other parts of Europe had to learn to cure and barrel the fish at sea - or come to some arrangement with another boat that would come out and collect the catch at frequent intervals - and thus developed large fishing vessels in order to carry sufficient

paraphenalia and supplies.(30)

The normal method of curing was to slit open the fish and pull out the gills, stomach, heart, liver, gall bladder, and genitals, which caused the fish to lose most of its blood very rapidly. This method also removed the parts liable to spoil most quickly. Then the fish were packed in barrels between layers of salt which formed a brine with what blood remained, and more or less sealed the fish from the air thus preventing deterioration. During the curing process the herring's colour, taste and smell gradually changed.(31) The steady demand for Dutch salted herring was due largely to their ability to supply a better-cured product and their efforts at maintaining a high quality control. The remarkable success of the Dutch herring industry is discussed below.

For all the European herring fisheries a supply of reasonably palatable salt was required. The Dutch preferred Spanish or Portuguese, and in the later 16th century used salt-on-salt, where the Spanish or Portuguese salt was added to seawater and refined a second time. Although Scotland produced salt at home - and even exported some of it - it tasted so bad and its preserving powers were so limited that the Scottish fisheries imported Bay salt, as did the English and Baltic fisheries.(32)

The Dutch fished in three seasons around the coasts of Britain, not, as contemporaries believed, following the same shoal round and round, but rather meeting different populations of fish moving in contradictory directions. Other sections of the fishing communities -

the French, or East Anglian for example - worked out their own annual routines.(33) Herring were found around almost all the Scottish coast at some time during the year, and fish played an important part in both the national diet and the economy.

The European fisheries expanded overall during the sixteenth century, although their total yield did not grow at the same speed as did the rate of population. Exceptionally, the previously great Scania herring fishery declined almost to nothing, and the English fishery did little better than stagnate for a long time. This is interesting as the English government took more interest in its fisheries than any other European state, apart from the Dutch.(34)

Until at least the seventeenth century England exported only small quantities of fish.(35) Apart from very minor fisheries, for the English fishermen there were two main herring seasons, one off the North Yorkshire coast where most of the catch must have been consumed locally as very little is recorded as having been exported. The other major fishing was off Lowestoft and Yarmouth. Fishermen came from other parts of England, and from Holland, France, and some from the Spanish Netherlands. At its peak (around 1600) as many as five hundred boats attended, and those foreign boats too small to cure on board had to land their catches in Yarmouth either fresh or lightly salted.(36) Processing and marketing the fish provided employment and profit to a not inconsiderable number of people, even if the volume of herring exported was not impressive by European standards.

The Yarmouth season was the most important for the French herring fishery, centred on Dieppe but including Calais and Boulogne. In fishing skills the French were equal to the Dutch and had boats of comparable size. Other factors put them at a disadvantage. Fishing boats were particularly vulnerable in times of war, and for the French, as Michell points out, this made the first half of the sixteenth century, to 1569, particularly difficult. Apparently in the 1550s a gathering of about 250 French fishing boats was mistaken for an invasion fleet heading for the east coast of England.(37) The Dutch were also able to produce a consistently better-cured product. France's was a major fishery during the sixteenth century, but after that exports dwindled.

The herring shoals were also found, but not consistently, off the Norwegian coast and the local people fished from small boats. At times Norwegian cured herring appeared on the Baltic market, as happened in the 1580s, but normally only a small proportion of the total catch was for export, and for stretches of time there were less fish caught and no surplus made available. Two other minor fisheries, of Hamburg and East Friesland, were commercially based in imitation of the Dutch buss system, but the Dutch were believed to have squeezed them out.(38) The Dutch herring industry was outstandingly successful in the sixteenth century against its European competitors. Beside it, Scotland's contribution was modest, but not necessarily so when compared to the rest.

That the Dutch raked in fat profits from their Europe-dominating herring fishery was common knowledge in the sixteenth century. Exaggeration and complaint were widespread amongst the competing nations. Charles V was told that the Dutch got more gold and silver by catching and selling fish than other countries did by digging the precious metal out of the ground.(39) The Scots and English should have had the advantage in catching some of the best herring found swimming around the British Isles, but the Dutch were innovative enough to perfect a better-cured, very marketable product. Until the end of the fifteenth century Dutch fishing boats had only occasionally approached the Scottish coast, but after that the Scots became increasingly irked by their presence and commercial success. By the 1530s relations between rival Scots and Dutch fishermen had deteriorated almost to the point of hostility.(40)

It is worth briefly considering how the Dutch achieved their outstanding success in the European herring trade, in contrast to the Scots. From the fourteenth to the middle of the sixteenth century they experienced a steady progress in organisation and technology, maintained an edge over their competitors and a production level which did not peak until the seventeeth century.(41)

Initially, herring cured on board ship was inferior to that processed ashore. Over time the Dutch improved their curing methods so that by the sixteenth century their product enjoyed such a reputation for quality that it could command the highest prices. In 1575 Dutch herring fetched £24 10s per last on the market at Rouen,

whilst those from Yarmouth sold at £20 12s which was considered an achievement.(42) The curing method used by the Scots took place ashore (as with the English), not on board ship (as with the Dutch and the French). The Dutch method was gradually improved, thus giving their herring a competitive edge. There is evidence that in the seventeeth century Dutch fishermen worked so quickly on gutting their herring catches that parts of the stomach got left behind. Whether in the sixteenth century they had left in certain parts (the pyloric caecae) by accident, or had realised that it contained a substance, now known to be an enzyme called trypsin, which promoted the curing and improved the smell, is not clear.(43) After landing, the herring were repacked with fresh salt, and each barrel contained a guaranteed minimum weight of fish.(44) In taste, smell and quantity the Dutch was superior to any other European herring, including the Scottish.

The Dutch system required steady injections of investment capital, which it got at low interest.(45) Without the need to return nightly the boats were able to fish for five to eight weeks at a time. This meant they had to be large enough to carry food supplies, salt and barrels, with enough room for all the crew and all the herring. Merchants and skippers went into partnership, people invested in the industry, and fishermen became wage labourers. Increasingly merchants took control of the entire business, supplying all the capital, and owning the product from being caught to final consumer, the outlay involved being much higher than that required by the Scots and English.(46)

Scottish ships and gear were inferior to those of their main continental competitors and shrewd capital investment would no doubt have proved useful.(47) However, the Scots had no need for particularly large boats as long as they were content to cure their catch on shore. The Dutch fishing boat was of a particular design, the buss, widely used in Holland by the 1440s. At that time it was of comparable size to coastal fishing boats, but by the sixteenth century had reached 60 tons. Later in the period they were typically about 140 tons, with a maximum of 200. In the seventeeth century a normal size was 60 tons. French fishing boats were also large, as they too had to cure on board. Scottish fishing boats were not as large as these, but perhaps not always tiny. Efforts were made to encourage the larger boats and discourage the small, and in 1491 Scottish boats under twenty tons were actually forbidden to participate, although it is not clear that this legislation was effective.(48) By comparison, English boats ranged in size from two to fifteen tons, if anything generally smaller than the Scots - at least if the foregoing legislation reflected reality rather than a vain hope.(49)

An important part of the Dutch industry was its quality control, and a network of regulations was built up to enforce it. From the fifteenth century onwards there were regulations regarding salting, packing, size of barrels, precise dates for the fishing seasons, the volume of salt used per barrel and so on. In 1519 Charles V began issuing general rules governing the entire Dutch fishery, and in 1567 a standing committee of representatives from the major exporting towns was first set up. Through issuing licences the committee controlled

production, and through production, prices. With merchants on the quaysides repacking was monitored and each barrel had to be branded by an inspector. By these means the committee eliminated poor quality herring and avoided glutting the market.(50)

The Scottish herring fishery was not so integrated, nor quite so strictly controlled, but between them Parliament and the Convention of Royal Burghs issued fairly comprehensive regulations.(51) Some of this has already been referred to in the foregoing section on salmon, some is more conveniently treated in the following section on cod, for the legislation seldom considered herring in isolation. The official regulations nevertheless covered many aspects of the herring fishery: standardisation and control of packing, plus inspectors, restricting facilities available to foreign fishermen, the salt to be used, the nets, fishing seasons, and so on.(52) The aim and methods were very similar to those of the Dutch, but with the industry on a smaller scale, and the quality to be maintained not as good in the first place.

Over the 140 year period the level of herring exports from Scotland showed considerable fluctuation, yet overall it appears to divide clearly into two sections: a modest level of exports rarely over 200 lasts per year, until 1535 (the Exchequer roll for 1536 is missing), and then a marked increase to a consistently higher level of around 800 lasts or more in the closing part of the century (Figure 5.5). Only herring out of the three groups of fish maintained growth through to the end.

Within the first section there was one outstandingly good year, 1487, when over 700 lasts were exported. This was due not only to a few more burghs exporting herring than had been in the previous years, but primarily to Dumbarton which alone exported over 600 lasts. The returns from this port survive for other years in these decades, but never again show such a peak.

The period from 1537 shows a consistent rise overall, but the biggest peak was in 1541 when over 1500 lasts were exported, a very considerable quantity of food, amounting to over twenty million fish. Over a thousand lasts were exported in three other years, 1542, 1555 and 1582. In the 1540s the Pittenweem group of burghs, with over 800 lasts in 1541, had replaced Dumbarton as the major herring exporting burgh, ahead of both Edinburgh and Dundee, as in the 1550s. By 1581 Dumbarton alone was exporting over 200 lasts (as much as or more than all of Scotland in the earlier section), and Pittenweem and Edinburgh achieved 450 and over 500 lasts respectively. In the 1590s Dumbarton's overseas herring trade was continuing to grow, unlike the Pittenweem group.(53)

Pedro de Ayala, writing in 1498, was exaggerating when he claimed that the Scots had such quantities of fish that they could supply Italy, France, Flanders and England, but fish from around the Scottish coast was consumed widely throughout western Europe. It has been thought that in the sixteenth century a major market for Scottish herring was the Baltic, but this is only partly true and the herring went to other unknown destinations, presumably France and (to a lesser

extent) England. The quantitites of herring passing to the Baltic in Scottish ships, from the 1560s to the 1650s, have been calculated by Lythe.(54) When compared with the amount leaving Scotland as recorded in the Exchequer rolls, it is clear that Scottish herring was not exported primarily to the Baltic. During the 1560s it was less than 9 percent of Scottish herring exports, but the poor state of the custumars' accounts during this decade make it more than likely that the Exchequer figures are an under-estimation of the real totals, and so the percentage which went to the Baltic was probably even less. During the 1570s it was 5 percent; the '80s, less than 4 percent; and in the '90s, it had risen to 17 percent.(55)

Since so little of the herring was exported to the Baltic it is perhaps not surprising that there are few clear correlations between years of heavy import of grain and years of large exports of herring (or indeed of other fish) to pay for imports of rye. There are, however, some occasions when weather conditions were severe, and grain prices (in England, and probably Scotland) were high, and when exports were increased of all varieties of fish from Scotland. In 1554-5 Scotland suffered a harsh winter, and in 1555-6 grain prices in England were the highest for the whole period.(56) In 1555 herring exports were sharply up, although during the early 1540s they had been half as much again. Cod and salmon increased, too, although some of their top exporting burghs had long accounts. 1597 was another year of peak grain shipments from the Baltic and high wheat prices in England.(57) Cod and herring exports were both substantial, but not usually so in that decade (Figures 5.5 and 5.9). More generally, however, levels of fish exports did not go up in years of grain

shortage. Indeed, since fish was useful food in a bleak season, one might equally expect that it would be kept at home when other sustenance failed.

COD

The cod industry was one of the major European fisheries during the period, although in Scotland as elsewhere it came second to herring. Cod were found in commercially-exploitable quantities in the North Sea, off the west coast of Scotland, and northwards around the Faroes and Iceland. Cod were fished in the Baltic and all round the coast of Europe, but not in significant quantities. Fishermen from some nations sailed across the Atlantic and successfully cod-fished all the way from Labrador to Cape Cod, but Scotland was not among them. Those who did participate in the deep sea fishery included fishermen from Portugal, Spain, France and England.(58) This suggests that cod was even less important to Scotland, relative to herring, than in most other countries on the west European littoral.

The technique universally applied for catching cod was simply to hang a long line with individually baited hooks. This required minimal capital outlay, making cod fishing accessible to almost anyone living by the coast who wished to do it, and which led a seventeenth century Frenchman to describe it as "truly... the best trade in Europe". At that time English war ships convoying the fishing boats off Iceland were unofficially catching large quantities of cod simply by hanging lines over the side, rivalling the catches of the fishing boats themselves.(59) Cod fishing had another, indirect, advantage in that cod was a predator of herring, and thus the successful cod fisherman improved chances for survival for the herring population at

the same time.(60) A disadvantage was the unpredictable size of the catch. Unlike herring the cod did not swim in shoals, neither could they be seen from the surface.(61)

Scotland's abundance of fish in the sixteenth century is well attested. There is some evidence that this had not always been the case at least regarding cod, for in 1304 Sir John de Drokensford urgently requested salted haddock and cod from Newcastle, needing extra supplies in order to be able to entertain the king in St Andrews during Lent.(62) During our period, however, the cod industry formed a substantial part of Scotland's fisheries. The quantities consumed by the domestic market are difficult to estimate as no records were kept. For most of the period there was a large enough surplus to support an established export trade.

It was the subject of much legislation. Some of this - for instance the regulations covering packing and peiling - was applicable to all the fisheries and has already been outlined. In other instances herring and cod were treated together in the regulations, with salmon separate from the rest.(63) In places the record refers to the different types of fish using terms which may require clarification. Mulones was the latin word used for cured cod, commonly called keling (keiling), or white fish. White fish was also used as a general term for all exported fish apart from salmon and herring such as ling, codling or stockfish, as well as cod. Keling could also apply to any large fish, cod or haddock but not herring.(64) Stockfish could mean a cod cured in the normal fashion (see below), cod dried but not salted, or any other cured member of

the cod family. Other names used for cured cod include poor John, merluche, or possibly, Haberdine fish.(65) Thus references in the Exchequer Rolls to keiling, white fish, sathis, stockfish or hake have all been included in the figures for cod. If the amount of duty paid was unspecified then it has been calculated according to the rate for cod then current.

In the Exchequer Rolls the cod were normally reckoned singly.(66) From the legislation it is apparent that the cod were indeed exported in barrels, the same size as those for herring, and subject to a similar quantity of regulations regarding their size etc., as were the herring and salmon barrels. The Act of 1540 requiring standard measures to be made mentioned keling expressly. In 1571 the Convention of Royal Burghs decided that for herring and white fish the barrel size should be ten gallons, and that the cooper should mark each one he made. Only two years later an Act of Parliament declared that barrels for herring and white fish were to contain nine gallons of the Stirling pint.(67) In 1584 instructions were issued that a standard measure was to be made for herring and white fish barrels (as with salmon). It was to be kept in Edinburgh, and each burgh was to take and keep a pattern of it.(68)

As with salmon, concern over quality control extended to the curing process. The cod were only lightly salted - making the process cheaper - and then wind dried, a method suitable for fish with a lower fat content. Scottish salt was not normally considered good enough for fish curing so that Scotland imported Bay salt, and yet England, although preferring French salt for most fisheries, used Scottish or

Newcastle salt for preserving cod.(69) The Scots were more particular. In 1587 an Act of Parliament declared that refined salt (salt-on-salt, otherwise called great salt) was "necessary and profitable" for the salting of salmon, keling and other large fish. The small salt made in Scotland could not be used. This was confirmed by the Convention of Royal Burghs in 1609, and salt regulations continued into the seventeenth century.(70)

The Fisheries Act of 1584 also set up staples for herring and white fish at Leith, Crail, Ayr and Dumbarton, presumably intending all such exports to be channelled only through these four burghs, two on the east coast and two on the west. At the Convention of Royal Burghs in July there was protest against this part of the Act. The rest of the fish-exporting burghs on each side of the Forth objected to Leith and Crail being so privileged.(71) The following year they repeated their complaint, and the restriction was quickly removed, herring and other fish caught in the Forth no longer had to be brought only to Crail and Leith to be packed and peiled.(72) There is no record of protest from the west coast burghs regarding Ayr and Dumbarton. It may be that they were content. If it had merely been unenforceable one would have expected the restriction to have been lifted from both coasts, not just in the east.

Two of the best international markets for cod throughout the early modern period were Spain and Portugal. Even for a Catholic country fish consumption in Spain was particularly high. Mention has been made already that Spain regularly had to import food supplies and ran a trade deficit over the period. This demand was met to some

extent by their own fishermen working in Newfoundland, but their boats suffered quite badly in wartime from attacks by the English and the French.(73) However likely, there is little hard evidence to show that the Scots were able to market their cured cod in Spain.

The Baltic was not a good market for Scottish cod during the sixteenth century. Only in the 1590s did exports of fish other than herring become noticeable, and then only very small quantities.(74) France was a major importer of Scottish cured fish, but not neccessarily large amounts of cod. French fishermen dominated the Newfoundland cod fishing from the mid-sixteenth century and they specialised in two types of cured cod, processed by different methods. They also fished around the British Isles. Much of what they caught was used to feed their own people, the rest exported primarily to southern Europe.(75) There could not have been the same demand for Scottish cod as there was for say, Scottish salmon. The English, like the Scots, were able to exploit the local cod fishing and much of their catch was absorbed by the home market. They also bought regular quantities from the Scots, and did so throughout the period and into the seventeenth century, but in diminishing amounts.(76)

After packing and peiling the cod sold for export were liable for duty, 2s per long hundred until 1510 when it was doubled to 4s.(77) The doubling of the rate shows up clearly by comparing Figures 5.9 and 5.10. The high peaks previous to 1510 which indicate a marked increase in units, are dwarfed by those which come after 1510 on Figure 5.10, for revenue increase appears double. Over the period cod

exports went through two cycles. They rose from nothing in the 1460s to a peak of 60,000 fish in 1498 (a figure approached in 1480-81, but exports were normally half that), only to sink again to almost nothing after 1516. The second cycle was much greater, rising very unevenly to over 100,000 fish in 1574 and sinking again in the 1590s: most of the strength of the second cycle came after 1555, although there were good years earlier, as in 1525 and 1539-42.

The Pittenweem group of burghs, although ranked first for cod exports, came into prominance only relatively late on. From nothing in the 1460s, they accounted for about one-fifth of the total from the 1490s to the 1510s, over one-half by the 1530s, and handled over 90 percent of the total cod trade by the 1570s, dropping to 70 percent by the end of the century. Edinburgh overall took less than a quarter of the trade, but its largest contribution was made in the 1520s, almost 60 percent (Figure 5.11). The third ranked burgh for cod was Montrose taking less than 7 percent overall, and other burghs were smaller still. From Figures 5.11 and 5.12 it is shown that at some point during the 1540s and '50s the "other burghs" made a sudden, massively increased contribution to the total. This was due mainly to Dundee, but also Banff, where in 1541 (Banff), 1546, '47, and 1558 they exported large quantities of cod (or white fish), and then dropped back down again to their usual, negligable amounts.

In conclusion, it is clear that each of the three main branches of the fisheries had differing fortunes. For salmon, the greatest volume went out in the middle decades, for cod (much the least significant, see Figure 5.13) in the period from the mid-1550s to the

1580s, for herring the greatest sustained success was after 1550 to the end of the century. Herring must have made the most significant contribution to filling the gap caused by the decline of the wool trade.

NOTES

1. A.R. Michell, "The European Fisheries in Early Modern History", in: The Cambridge Economic History of Europe, V (Cambridge, 1977), 140-142.

2. Michell, "European Fisheries", 136.

3. Acts of the Parliaments of Scotland, eds., T. Thomson and C. Innes (Edinburgh 1844), ii, 7; i, 576; ii, 242.

4. APS, i, 75; ii, 51.

5. APS, iii, 42a; Records of the Convention of Royal Burghs 1295-1597, ed. J.D. Marwick (Edinburgh, 1866), i, 75.

6. APS, ii, 166; Nicholson, Ranald, Scotland: The Later Middle Ages (Edinburgh, 1978), 433; APS, ii, 373.

7. Nicholson, Later Middle Ages, 433.

8. APS, II, 119, 178.

9. Ibid., II, 375.

10. RCRB, i, 17, 23.

11. APS, III, 82.

12. RCRB, i, 89, 115.

13. APS, III, 302.

14. RCRB, ii, 12.

15. Glasgow (which does not appear in the Exchequer roll as an exporter of salmon, perhaps produced for home consumption only), Dumbarton, Irvine, Ayr and Renfrew. RCRB, ii, 31; APS, II, 221, 242; Ronald Edward Zupko, "The weights and measures of Scotland before the Union", Scottish Historical Review, lvi (1977), 139-140.

16. Packing and Peiling: "pack" in Scots had two distinct meanings, a bundle and a bargain. "Peil" meant to take out, sort, separate. So to pack and peil salmon was not, as might be expected, to pack into barrels but rather to deal or traffic (make bargains) in salmon, and then to grade and cure them, removing the inferior specimens. RCRB, Index, Glossary: PACK and PEIL.

17. APS, II, 373: ROUSTIE: Uncertain as to what they meant by "roustie fish", but rouse also meant to sprinkle (fish) with salt in the process of curing, Scottish National Dictionary (Edinburgh, 1968), so it could mean simply salted fish. GRILSE: a young salmon on its first return from salt water, Chambers Dictionary (Edinburgh, 1975).

18. RCRB, i, 100-1: ratified 1582, ibid., 131.

19. The Exchequer Rolls of Scotland, vi-xxiv (Edinburgh, 1875-1908), vii, 430; viii, 317; ix, 146, 150; xxiii, 244.

20. RCRB, i, 218-9.

21. I.F. Grant, The social and economic development of Scotland before 1603 (Edinburgh, 1930), 315.

22. RCRB, i, 546-7; S.G.E. Lythe, The economy of Scotland in its European setting 1550-1625 (Edinburgh, 1960), 240.

23. Lythe, Economy of Scotland, 182; RCRB, i, 270; ii, 83.

24. Lythe, Economy of Scotland, 218; Grant, Economic and Social Development, 316.

25. Lythe, Economy of Scotland, 218-9; Lythe, "Scottish Trade with the Baltic", in: J.K. Eastham, ed., Economic essays in commemoration of the Dundee school of economics 1931-1955 (Dundee, 1955), 76.

26. A.R. Samuel, The Herring (London, 1918), 75-76; Samuel has long hundreds of 126 and 132, and mentions 120 as in Scotland, so there are a variety of total numbers of herring to the last. But in Scotland the long hundred was standard. There is a misprint in Lythe, "Scottish trade with the Baltic", p. 76 note 5, where an extra nought has been added. It should read "about 12,000 fish" (that is, 14,400 allowing for the long hundred of 120). A sixteenth century Netherlands last was 14 barrels, each containing about 900 fish, which makes 12,600 per last, very close to the Scots and English.

27. Samuel, The Herring, 86; A.L. Murray, "The Exchequer and Crown Revenue of Scotland", University of Edinburgh Ph.D. thesis, 1961, 146; APS, II, 6. Figures converted to the rate per barrel in each case.

28. ER, viii, 199; ix, 65; ix, 146.

29. Murray, "Exchequer and Crown Revenue", 146; ER, ix, 210.

30. Michell, "European Fisheries", 142-143.

31. Richard Unger, "The Netherlands Herring Fishery in the Late Middle Ages: the False Legend of Willem Beukels of Biervliet", Viator, ix (1978), 336.

32. Michell, "European Fisheries", 180-181. See Chapter Six for details of Scotland's salt trade.

33. Michell, "European Fisheries", 139, 147.

34. Ibid., 135, 178.

35. R. Davis, English Overseas Trade (London, 1973), 11.

36. Michell, "European Fisheries", 143.

37. Ibid., 154.

38. Ibid., 155.

39. Richard Unger, "Dutch Herring, Technology, and International Trade in the 17th century", Journal of Economic History, (1980), 253-279.

40. S.G.E. Lythe and J. Butt, An Economic History of Scotland 1100-1939 (Glasgow, 1975), .

41. R. Unger, "Dutch Herring", 256.

42. Michell, "European Fisheries", 153.

43. R. Unger, "Dutch Herring", 257.

44. Ibid., 257, 261.

45. Michell, "European Fisheries", 153.

46. R. Unger, "Dutch Herring", 258.

47. J. Wormald, Court, Kirk and Community: Scotland 1470-1625 (London, 1981), 43.

48. Grant, Social and economic development, .

49. Michell, "European Fisheries", 143.

50. R. Unger, "Dutch Herring", 261-262.

51. Lythe and Butt, An Economic History of Scotland, 53.

52. Grant, Social and economic development, 312.

53. ER, xxii, 249. The published volume of the Exchequer Rolls records Edinburgh as having exported 902 lasts of herring and codling in 1592. According to the duty paid, £55 4s, this should read 92 lasts.

54. Lythe, Economy of Scotland, 57-58; Lythe, "Scottish trade with the Baltic", 74.

55. I have used Lythe's corrected figures. The years for which figures are available and from which annual averages were calculated are as follows: 1562-69, 1574-79, 1580-89, 1590-99. The ER figures were calculated using these year, except for the 1580s which have no figures for 1583-89.

56. Lythe, Economy of Scotland, 16.

57. Ibid.

58. Michell, "European Fisheries", Figure 2, 136; Figure 4, 156; 156-161.

59. Ibid., 138, 140, 158.

60. Estimates vary, but a cod may consume between two and twelve herring per day. Samuel, The Herring, 30-31.

61. Michell, "European Fisheries", 138.

62. Grant, Economic and Social Development, 115.

63. APS, III, 82; II, 166.

64. ER, xiv, 49; A.L. Murray, "Exchequer and Crown Revenue", 146; RCRB, Index: glossary KEELING; Michell, "European Fisheries", 138.

65. Ibid., 157; Chambers Dictionary.

66. ER, xi, 53, 55; xx, 97, 148, 297.

67. RCRB, i, 21; APS, III, 82.

68. APS, III, 302.

69. Michell, "European Fisheries", 157, 181.

70. J. Davidson and Sir Alexander Gray, The Scottish staple at Veere: a study in the economic history of Scotland (London, 1909), 90-91; RCRB, ii, 284.

71. APS, III, 302; RCRB, i, 191-2.

72. RCRB, i, 204-5; APS, III, 378.

73. Michell, "European Fisheries", 157.

74. Lythe, "Scottish Trade with the Baltic", 76.

75. Michell, "European Fisheries", 158, 161, 164.

76. Ibid., 160; Lythe, Economy of Scotland, 218.

77. ER, x, 232; xii, 159; xviii, 147; xxiii, 243.

Chapter Six

Coal and Salt

Introduction

Exports of coal and salt are dealt with in the same chapter because their industries were linked both through manufacturing processes and, frequently, common ownership, as a person holding rights to coal-bearing land was often owner of the salt pans also. Both coal and salt were produced around the coast, and had existed on a small scale long before their expansion at the end of the sixteenth century, at which point they made an increasing contribution towards Scotland's balance of payments, coal more so than salt (Figure 6.9).(1) Coal and salt production have been described simply as extensions of landed estate exploitation. This alone distinguishes them from the other export commodities which traditionally came under the control of the merchant burgesses. Until the 1570s, production and exports of both items were on so small a scale that these exceptions, if anything, only proved the rule regarding the merchants' monopoly of overseas trade.

The export trends for each of them over the whole period are not identical (compare Figures 6.1 and 6.5), but from 1574 onwards both coal and salt experienced unprecedented expansion, due partly to a degree of integration between them, as exemplified by George Bruce's combined venture of coal mining and a salt industry in Culross, but also to changes within the structure of the whole export trade. It has been calculated that more coal was consumed around the Forth in producing salt for export than was itself exported.(2) Figures 6.3 and

6.7 then suggest not only that some coal-producing areas such as Dysart appear to have used their coal for salt production (unlike the Pittenweem group which tended either to export it or to use it for the production of salt which was only consumed locally), but also that the burgh of Culross was producing enough coal by the 1580s to rank first and second in salt and coal exports respectively over the period, even though it only began to render an account in 1580 (Figure 6.1.a and 6.5.a).

COAL

Apart from an increase in salt production, other demands were made upon supplies of coal. One of the sixteenth century's most economically significant changes was a shift in emphasis from wood to coal as a fuel source, which took place mainly in England and northern France. For a proportion of the Scots, coal had long been a primary fuel.(3) For these people the sixteenth century brought a change not in fuel type but rather a new and increasing demand for their coal, that is, an export market.

Within Europe the use of coal was not novel, but a number of factors combined during the century to make heavy demands on supplies of timber, thus forcing up the price and enabling coal to become commercially viable. The scarcity of wood was due to a growth in population, coincident with a gradual rise in the standard of living which made greater demands for both domestic and industrial consumption. The expansion of agriculture into woodland areas, which was essential to feed a larger population, put further pressure on fuel supplies, especially in areas where smelting was beginning to flourish. In Scotland, in 1555, legislation was passed to control the felling of trees, and interestingly, efforts were made to secure a regular supply of timber from Scandinavia by making certain goods exempt from an export ban: the first of which was salt.(4)

During the sixteenth century Europe's leading coal industry was based at Liège. In a way reminiscent of the Dutch herring industry, up until mid-century it was the only coal producing centre in Europe that could be described as progressive. The miners were organised into guilds, whilst a special jurisdiction was provided for mining disputes, and processes were developed to turn the coal into cleaner-burning briquettes (see below). At Liège they managed to produce quantities of an attractive product at a competitive price despite being located two hundred miles from the sea, when normally, high transport costs per mile imposed the greatest strain on profitability. In a mining accident at Liège in 1515, eighty-eight miners were killed. A tragedy on that scale could not have happened anywhere else in Europe at that time.(5)

Coal was produced in a number of areas over the British Isles. The very rough and possibly unreliable calculations of J.U. Nef suggest that two regions, the Midlands, and Northumberland and Durham produced almost a third each of the British total, with Scotland taking a fifth, and leaving what remained to Wales, Cumberland and the rest. From before the sixteenth century Newcastle was shipping coal to London and many east coast ports, and round the European coast from Dieppe to Lübeck. The market covered a wide area but the demand was limited. Initially coal was taken instead of sand for ballast, and usually in foreign ships. Unless it went in this way, or as supplementary cargo, the selling price would not cover the transportation costs.(6)

Before the change in demand for coal which came after 1550,(7) there were only two exceptions to the general lack of interest in it. First, since at least the fourteenth century coal fires had been used to heat the Town Hall and the Mayor's Chambers at Aachen. Secondly, in the communities around the Firth of Forth coal was used not only for industry but also by peasants, mariners, noblemen and even the king. Coal from these two areas was qualitatively superior to that produced elsewhere. It burned more rapidly than other coal, but gave off far fewer noxious fumes. Other coal, when burned, gave off continual clouds of nasty-smelling, choking smoke which left quantities of soot on everything surrounding the fire (normally sited in the middle of the room), and hence its unpopularity. The enterprising coal producers of Liège processed their sulphurous coal into briquettes which avoided these problems when being burned.(8)

The people of Aachen and those around the Forth were fortunate. From the second half of the sixteenth century as people could no longer depend entirely upon wood, Scottish coal was much in demand, being considered "clean". The Scots had been mining coal since the early thirteenth century; it was a traditional part of the Scottish economy.(9)

The coal in Scotland was found along the sides of the Forth, in some of the east Fife burghs, and in Ayrshire.(10) Those around the Forth, particularly the south side, supported an increasing number of collieries from the 1570s onwards. Coal had a long tradition in the

area: in 1291 William de Oberwill of Pittencrieff, Dunfermline, granted by charter to the Abbot and Convent of Dunfermline the right to open a coal-heugh on any part of the estate, excluding arable land. They were to take as much as they needed for their own use, but no more.(11) In 1408 Henry, earl of Orkney was producing coal from the outcrops right on the shore's edge at Dysart, a seam still worked in the early twentieth century.(12)

The area between Edinburgh and Haddington grew into a major centre of the Scottish coal mining industry: the capital city provided a steadily expanding market. Coal was also produced in Lanarkshire, but in smaller quantities than from Fife and the Lothians, and perhaps not of the same quality. It was not possible to transport bulky goods down the Clyde except in very small boats (until the Clyde was deepened in the eighteenth century and the opening of the Monkland canal), thus making a flourishing export trade from inland coal-producing areas unlikely. Although most coal in the Clyde Valley came from near Glasgow, the first coal exports were shipped from Dumbarton. Within the 140 years covered in this thesis, coal was first exported from Dumbarton in the 1550s, in very small amounts. In the Clyde valley area it was not until the seventeenth century that mining was substantially developed.(13) The third major coal producing area was in Ayrshire. The burghs of Ayr and Irvine were both able to berth larger ships than could Glasgow, and were exporting coal to Ireland from at least the mid-century. Nevertheless it was not until after 1600 that the trade grew to any significant size.(14)

The overall volume of Scottish coal exports rose significantly in the later sixteenth century, and more sharply still after that: Investment and interest in technological innovation followed a similar development. Sir George Bruce's famous colliery at Culross, described in 1618 as "this unfellowed and unmatchable worke", was actually started in 1575, and within five years had begun accounting regularly at the Exchequer audit for exports of coal and salt (Figure 6.1.a). The size of the investment was several thousand pounds sterling. By 1621 mine-owners were prepared to invest heavily and cooperatively in a project to place beacons on all the crags and blind rocks around the Forth.(15)

The Scots periodically were subject to anxiety as to whether or not their coal supplies were about to run out, in the fifteenth century as well as in the later sixteenth, when demand had increased and the fear was perhaps more understandable.(16) The first Act prohibiting the export of coal was passed in 1563. It explained clearly the reason why: there was a fuel shortage caused by the exporting of coal, which was commonly used as ballast for empty ships (as in England). The only coal allowed to leave Scotland was for the use of seamen on board ship. Two years later this was modified by the Privy Council to allow smithy coal to be exported.(17) The export totals from the Exchequer rolls do show a drop during these years, but because the records are poor for that period, it is not clear whether or not the ban was effective (Figures 6.1 and 6.1.a).

In 1574 the masters of salt-pans were still complaining of coal shortages, and in 1579 another Act of Parliament reiterated the ban of 1563 whilst offering a one-third cut of the escheat to informers. At the Convention of Royal Burghs the following year the Commissioners expressed their support for earlier legislation on many aspects of trade including the ban on coal exports.(18) Exports did fall in 1579, but by 1580 they were back up again. By 1585 Parliament felt the need to draw attention to the Acts prohibiting coal exports to England or elsewhere by having them proclaimed, a device later repeated: in 1597, and for the following two years the export totals dropped, but in 1609 the Act was proclaimed again.(19)

The Convention continued vigorously to support these efforts. In July, 1587, the Commissioners wanted the Acts against the export of forbidden goods to be ratified, and especially that the coal trade be "simply prohibited" because of the poor state of the mines and "exhorbitant" shortage of coal. It must have been difficult to enforce the ban. It also appears that some burghs actually involved in the coal trade were not really committed to suppressing it. In 1596 two of them, Culross and Dysart, were each fined £100 for failing to be sufficiently diligent in their efforts to prevent the export of coal. At the next Convention all the burghs were to prove their diligence, under threat of a fine now doubled to £200.(20)

Despite such penalties the coal trade expanded dramatically from 1574 onwards, legally sanctioned or not. Bowman points out that for the owners of the coal-heughs the opportunity for making money on the continental market was incentive enough to find ways of evading the law. It is hardly unexpected that the government was concerned to ensure that the people had sufficient fuel, and the fear of permanent shortages was real even though, as it turned out, supplies lasted a further three centuries or more in some areas.(21) On the other hand the coal owners had strong arguments in favour of a free market.

Firstly, there was the matter of attracting capital investment. Before the sixteenth century the amount of capital required to begin producing coal was not large. In 1500, at Falkland in Fife, the sum of £5 was invested (22) but the extent to which the scale of investment had grown by the later sixteenth century is well illustrated by Bruce's coal works at Culross, mentioned above. Coal mining involved a long wait for any return on the sums invested, and without complete freedom to sell on the best possible markets the enterprise could not be financially worth the risk.(23)

Secondly, the increasing volume of coal exports generated almost £6000 revenue in customs duties (1.43% of the total). The rate on coal was 1s 4d per chalder, until the 1570s when the Exchequer Rolls begin to distinguish different types of coal - smithy, great and burn - and the rates of duty increased considerably.(24) In 1576 Edinburgh paid a rate of 3s 4d per chalder, and in the 1590s Culross was levying £1 per chalder on burn coal which is why Figures 6.1 (units) and 6.2

(revenue) are so different. In fact, there were earlier departures from the standard rate such as Pittenweem in 1542 charging 2s per chalder, and Dumbarton which used a rate of 4s per chalder in 1556.(25) In these instances, it is difficult to tell if this is evidence of early specialisation into different coal types, or weak arithmetic on the part of the Exchequer clerks. It may even indicate re-exported English coal, as is specified by Kirkcudbright in 1505.(26) There were sixteen bolls to the chalder, a weight equivalent to approximately two tons, although standardisation of the measures for coal was as difficult as for any other commodity. Later in the seventeenth century an Act of Parliament decreed that for customs purposes the Culross chalder of five tons was to be used.(27) Individual burghs had their own versions of the chalder, and these changed, normally grew larger, over time, but not necessarily in closer conformity to one another. In some instances there were two different sized coal-chalders, the "pan" chalder for carrying coal to the salt-pans, and the "sea" chalder for coal that was to be exported.(28) However, for customs purposes one standard sized chalder would be used for calculating the duty payable, and it is indicative of the importance of Culross that its size of chalder became the standard.

As well as the benefit of additional revenue, the crown could not have been unaware of further profits to be made from the coal industry, and that productivity was increasing, thus boosting the supplies available for both export and the home market. Some of the crown lands were coal-bearing, and whereas in the early period (1498) the king's treasurer had to pay a man to go and ascertain whether coal

could be mined at Kintyre, later on in the sixteenth century additional revenue could be raised by leasing coal rights on crown lands.(29) In 1542 the coal-heughs at Wallyford and Preston which belonged to the crown were valued at 1100 merks.(30) By 1600 it appears that the king's mines were not worked efficiently and were in need of fresh investment. The king was receiving neither profit nor coal from them, and so they were to be feued, except for the lands of Bonnyton near Linlithgow as Lord Livingston already held rights to the coal found there.(31)

Figure 6.1 shows clearly that coal exports were negligble until a sharp rise in 1574, after which they remained at a considerably higher level almost until the end of the century. The number of types of coal paying a variety of rates has resulted in different patterns for units (Figure 6.1) and revenue (Figure 6.2), and the income generated from those exports went almost straight up until 1596, from £150 to £400 a year (Figure 6.2). In fact coal exports had begun to rise appreciably from the 1530s, and had a noticeable response to the upturn in other export commodities during the mid-1550s, with a "mini-boom" period peaking in 1562, a year when wool exports dipped once again (Figures 6.1 and 3.1).

In 1574, when both coal and salt exports take such a sharp upturn, again, wool exports were at their lowest since the 1520s, a period for which the custumars' accounts are poor. By contrast, in 1574 Edinburgh's was a long account, Aberdeen's short (Figure 3.1.a).

SALT

In early modern Europe there were a number of known methods of producing salt. The traditional one was simple solar evaporation of sea-water in shallow pans around the coast. This was successfully practised in the Biscay area, and also, during the earlier period, in Scotland. For the Scots it had some serious disadvantages in that there was insufficient sun to produce salt in very great quantities, and what was produced was not only a poor preservative but also had a rather unpleasant taste to it due to traces of muriated magnesia.(32)

The coal-producing areas around the Firth of Forth and the coasts of Fife were able to employ a better method whereby the evaporating pans were raised above coal fires.

During the period Scotland imported supplies of refined salt for the curing of fish.(33) During the latter part of the sixteenth century attempts were made to process Scotland's own salt. In 1563 it was enacted that for the next fifty years no one was to make salt in the new way "invented by strangers" without a special licence. Licencees were to pay in kind a tax of seven percent to the crown, and a further one percent to the conservator of this kind of salt. In 1587 Lady Burley was given exclusive rights for seven years to make refined salt for salting salmon and other fish which could not be cured with the commonly made small salt. This would avoid the cost and difficulty of importing great salt from Spain, Brittany and the

Biscay area. During the late 1590s a grant was made to a Fleming called Eustachius Roche, in consideration of the increased revenue that was expected to be generated through the use of his method for producing better salt in greater quantities. It was expected that the revenue from salt would be increased by 100,000 merks per year.(34)

European salt producers other than the Scots were the Dutch, the English and most importantly the French. The salt pans at Veere became involved in the protracted negotiations over locating the Scottish staple. The Scots merchants sought to have the salt works there closed down as one of the prerequisites of settling the staple at Veere. They complained that when in production the salt works gave off an unpleasant smell which permeated the merchants' lodging situated near by. This may have been from chemicals in the sea water, or because the coal used was not claen-burning like Scottish coal, or it may have been an effort to sabotage a rival salt producer. In 1578 the Scots claimed that the evil air was losing them money, perhaps driving away custom.(35) The response from Veere was that there was little reason to fear the unwholesome air from the salt pans as it was only a north wind which "made any reek", and the salt pans were only in production for one season a year.(36) The Scots continued to insist, but years later the salt works at Veere were still in operation.(37)

Salt was also produced in England. Not only did the English buy Scottish salt, but the Scots also bought English. There is clear evidence that in the early seventeenth century English salt was being imported into south-west Scotland, but the Exchequer rolls show that

an Anglo-Scottish salt trade existed at least as early as the fifteenth century, for in 1469 English salt was being re-exported from Berwick on Tweed.(38)

The major European salt-producing region was around the shores of the Bay of Biscay, between the Loire and the Gironde. The climate allowed quantities of salt to be produced by solar evaporation of sea water in shallow pans. Production costs were minimal which kept the price competitive, but the system was liable to break down under the stresses of civil disorder or war. Biscay salt was coarse and not particularly clean, but was used widely for food preservation, curing fish, preparing leather and so on. Some importing countries processed it into refined salt. In Scotland, Biscay salt called great salt was imported for the fisheries, and the techniques used to purify it were not mastered until the end of the century.(39)

Although produced in France, it was the Dutch who became associated with the Biscay salt trade by becoming the major carriers. Their ships transported the salt to all the north European markets, particularly the Baltic where it was sold in exchange for grain.(40)

Throughout the period Scotland produced salt for home consumption and a surplus for export. The specialist demand from the fisheries for salt-on-salt could not be met in Scotland, and the quantities imported for the curing of fish were larger than those of the exports of unrefined salt. It is important that the salt included in these statistics was Scottish, not reexports of salt produced elsewhere. In most instances Scottish salt was unrefined, and so references to types

of refined salt would normally be reexports and thus excluded, except that by the 1580s and '90s Scotland too was beginning to manufacture refined salt.(41) It is not clear why specially imported salt should then be reexported. Yet the Exchequer rolls make explicit reference to non-Scottish salt, and in other instances the terms used suggest refined salt, probably non-Scottish.(42) This may have been necessary on occasions to make up a cargo or because a merchant knew of a profitable market. Great care is needed to distinguish types of salt, Scottish and non-Scottish, in the custumars' accounts.

Most of the entries refer simply to salt, presumably Scottish made. Some entries specified that it was fine salt, and this too was probably Scottish salt and so has been included in the figures. In 1572 Edinburgh exported fine salt which paid the ordinary rate of duty, when reexports normally, but not always, paid a higher rate.(43) Legislation concerning the salt trade refers to Scottish salt as small salt on at least two occasions, and it seems probable that "small" is used here with the same sense as "fine".(44) Similarly the coarse Biscay salt was called great salt. The Exchequer accounts occasionally use the term gross salt, a name which suggests it was similar to, if not the same as, great salt. The account for Berwick on Tweed in 1476 confirms the import of gross salt, and so entries using this term have not been included in the figures.(45)

Dundee and Edinburgh at times specify the export of coarse salt. Most of these entries differ from the standard form by not giving the quantity of salt involved, only the amount of duty paid. In 1578 Dundee's account gave both, and the rate was 8s per chalder, double

the duty on ordinary salt. For these reasons, exports of coarse salt have been treated as reexports and not included in the annual totals.(46)

The salt was normally reckoned in chalders and bolls, sixteen bolls making one chalder.(47) As with coal, the size of the salt chalder could vary considerably and perhaps change over time. In the early seventeenth century there were three distinct sizes in use just on the Forth: at Prestonpans it was 18 bolls or 1578 pints, at Kirkaldy or Wemyss and around the Fife coast it was 17 bolls or 1258 pints, and the Culross chalder which applied up the Forth towards Stirling was 21 bolls or 2478 pints.(48) There are a small number of exceptions where an account gives the salt in lasts and barrels, and from one of these entries the specified amount of duty showed that it was paying an equivalent rate, and so for the figures in this thesis the lasts were counted as chalders.(49) Some other of these accounts introduce another new term, barrald salt, which may be simply the same salt only packed differently, in barrels rather than sacks perhaps.(50)

Salt exports show up in the accounts from very early on: the first entry within the period was in 1461, from Edinburgh, paying duty at 1s per chalder or twenty chalders to £1.(51) By the 1470s some east Fife coastal villages began to appear, with an increase in the annual total clearly seen in figure 6.3. This rate remained in force until 1484 when it was doubled.(52) This new rate, 2s per chalder, was unchanged until the 1560s, but during these years there was a small number of accounts which charged a non-standard rate, some times an

exceptionally high one.(53) In 1562 Pittenweem began charging 4s per chalder, and other burghs followed suit so that this became the norm for some time.(54)

By the late 1570s, and consistently through the '90s, dramatically higher rates of duty were imposed.(55) This may have been solely due to it being reexported salt, although so great a switch away from home-produced to foreign produced exports seems unlikely. Some of the entries specify types of salt which were likely to have been produced abroad, and have been excluded for the reasons already given. It must be more than possible that some of the entries showing so high a rate of duty were exports of Scotland's own refined salt.

The export of Scottish salt to Norway was actively encouraged even when salt exports generally were prohibited. In 1579 Scotland's demand for supplies of timber was considered important enough to need special mention at the Convention of Royal Burghs, and salt was one of the export commodities listed to be sent to Norway without hindrance.(56) In the 1540s salt from Scotland was sent to Sweden, but it is not clear whether this was Scottish salt or re-exported Bay salt, although later on Scotland was to send both.(57) In 1561 eleven lasts were sent to Nyløse, this time definitely of Scottish salt, over 12 percent of the total recorded as leaving Scotland although this total is based on exports from Edinburgh alone which had a short account (Figure 6.5.a). The following year it was only five lasts of Scottish salt, just over 5 percent of the total, and this time Edinburgh's account was long.(58)

Fynes Moryson, writing in 1598, put salt first on his list of Scottish exports to Veere, and this trade expanded in the seventeenth century.(59) Scottish salt was sold in England throughout the sixteenth century. In 1535 legislation banned the sending of salt to England, and in that year the export total dipped (1536 is missing) although in fact it was the middle of an export "mini-boom". It was still being sold there in the 1590s, when Elizabeth granted a monopoly of all salt coming out of Scotland to the ports of England to one man, and the burgh commissioners demanded that the king send John Chisholm to England to seek redress.(60) Salt was one of the staples of the Baltic import trade, and although dominated by the Dutch bringing supplies of Bay salt, the Baltic has been considered the major export market for salt from Scotland.(61) The quantities which passed through the Sound for some of the years during the later sixteenth century have been calculated by Professor Lythe, and can be compared with the recorded exports from the Exchequer Rolls.(62) Between 1562 and 1569 nearly eighty percent of all Scottish salt exports went to the Baltic, although the Exchequer record is quite bad over this period and export levels appear very low (Figures 6.5 and 6.5.a). From 1574-79 when salt exports were at their peak, the percentage going to the Baltic had dropped to 17.6, and in the 1580s was down to 10.8 percent (although Scottish figures here are based on three years' figures only). During the 1590s the annual average number of lasts going to the Baltic was back up to what it had been in the '70s, and the percentage had increased to 24.5 percent as less salt had left Scotland. These figures may suggest that as Scotland exported greater quantities of salt, so new markets were found and others expanded, as

the Baltic did not significantly increase its intake until the 1620s.

The development of the salt trade was different from that of coal during the earlier period. Unlike coal, salt was not a part of the period of growth that for a number of commodities began around 1550. By that time salt exports had been through two "mini-booms", 1474-90 and 1528-43, and were to remain depressed until 1574. More important to the Exchequer, the 1570s boom was accompanied by an increase in the different types of salt being handled and the rates of duty to be levied on them, with even more specialisation than with coal. The higher rates of duty show up clearly in Figure 6.6.

The eight years, 1574-1582, were outstanding for salt exports during the period, 1578 being the peak year. This coincided with a time of political upheaval in France and the Netherlands, disruption of supplies, and a general rise in Bay salt prices.(63) The ability of the Scots to move quickly into a space in the market as a supplier of salt had been demonstrated in the fifteenth century, when in 1485 there had been a shortage of supplies and the price of Bay salt at Danzig had gone up to 40 merks per last. Their local salt was 38 merks, but Scottish salt was only 22.(64) The Exchequer record for this year has no account for Dysart and records no salt exports, but the following year's total was the highest until the 1570s (Figures 6.5, 6.5.a and 6.7).

It can safely be said that coal and salt made a most useful, if not very large, addition to the Scottish export trade, especially in the final quarter of the century when the need to find replacements for raw wool was at its most acute. Not the least significant aspect of this, in development terms, was that they represented new departures in industrial history. With the late sixteenth century integrated coal-and-salt works, that at Culross in particular, the history of Scottish heavy industry may be said to commence.

NOTES

1. S.G.E. Lythe, "The Economy of Scotland under James VI and I", in: Alan G.R. Smith, ed., The Reign of James VI and I, (London, reprinted 1981), 65; J.U. Nef, The rise of the British coal industry, 2 volumes (London, 1932), i, 45.

2. T.M. Devine and S.G.E. Lythe, "The economy of Scotland under James VI: a revision article", Scottish Historical Review, 1 (1971), 92. A.I. Bowman, "Culross Colliery: a sixteenth century mine", Industrial Archaeology, vii (1970), 355. In order to obtain 3 tons of salt, 97 tons of water had to be evaporated which required about 48 tons of coal. Ian H. Adams, "The salt industry of the Forth Basin", Scottish Geographical Magazine, lxxxi (1965), 155.

3. A.R. Hall, "Scientific Method and the Progress of Techniques" in: Cambridge Economic History of Europe, V (Cambridge, 1967), 105; Lythe, Economy of Scotland, 46.

4. Hall, "Scientific Method", 105; Bowman, "Culross Colliery", 354.

5. Nef, British Coal Industry, i, 13.

6. Ibid., 9-10, 23.

7. See also Figure 6.1 for the rise in exports of Scottish coal.

8. Nef, British Coal Industry, 12-13.

9. R.W. Cochran-Patrick, Early Records Relating to Mining in Scotland (Edinburgh, 1878), xliii-xlv; P. Hume Brown, Early Travellers in Scotland (Edinburgh, 1891), 26; S.G.E. Lythe, The Economy of Scotland in its European setting 1550-1625 (Edinburgh and London, 1960), 46.

10. Lythe, Ecomony of Scotland, 48.

11. Nef, British Coal Industry, i, 5; A.S. Cunningham, Mining in the Kingdom of Fife, 2nd edition, (Dunfermline, 1913), 9.

12. 1913: still apt to catch fire, and carbon-monoxide fires were a frequent problem. Cunningham, Mining in Fife, 10, 105.

13. Nef, British Coal Industry i, 46-7, 49-50.

14. Ibid., 51-52.

15. Lythe, Economy of Scotland, 47-49; Nef, British Coal Industry, i, 43; Bowman, "Culross Colliery", 355.

16. Cunningham, Mining in Fife, 11; Nef, British Coal Industry, ii, 211.

17. The Acts of the Parliaments of Scotland, eds., T. Thomson and C. Innes (Edinburgh, 1844), ii, 543; Cochran-Patrick, Early Records...Mining, xlv.

18. APS, iii, 93; iii, 147; The Records of the Convention of Royal Burghs, 1295-1597, ed. J.D. Marwick (Edinburgh, 1866), i, 103.

19. APS, iii, 426; iv, 121, 136, 408.

20. RCRB, i, 240, 277-278.

21. Lythe, Economy of Scotland, 84.

22. Nef, British Coal Industry, i, 8, n.2.

23. Lythe, Economy of Scotland, 84-85.

24. The Exchequer Rolls of Scotland, vi-xxiv (Edinburgh, 1878-1908), xii, 262, not 1s 3d as in A.L. Murray, "The Exchequer and Crown Revenue of Scotland 1437-1542", University of Edinburgh Ph.D. thesis, 1961, 146.

25. ER, xxiii, 186; xvii, 458; xviii, 338.

26. ER, xii, 368. It paid a rate of 1s 2d per chalder.

27. ER, xv, ooo; Nef, British Coal Industry, ii, 370-371, 409.
The Exchequer rolls translate celdrarum as chalders: ER, xv, 52, 184.

28. Nef, British Coal Industry, ii, 371.

29. Lythe, Economy of Scotland, 84; Cochran-Patrick, Early Records...Mining, i, xliv.

30. APS, ii, 424.

31. Ibid., iv, 229; Cochran-Patrick, Early Records...Mining, i, xlvii.

32. Lythe, Economy of Scotland, 49-50.

33. See Chapter Five.

34. APS, ii, 538; iii, 494; iv, 156.

35. RCRB, i, 59.

36. RCRB, i, 64.

37. RCRB, i, 78, 100, 114.

38. Lythe, Economy of Scotland, 216, 223-4; ER, vii, 665.

39. Lythe, Economy of Scotland, 175.

40. Ibid., 175.

41. APS, iii, 494; iv, 182b.

42. ER, 1469, 665; 1529, 515.

43. ER, xx, 98-99.

44. APS, iii, 82, 494.

45. ER, viii, 389; xv, 515.

46. ER, xx, 98-99, 144, 295. However, in 1581 Dundee exported coarse salt and charged the standard rate of duty on it: ER, xxi, 158.

47. ER, ix, 442, where the current rate is 2s per chalder or ten chalders to £1.

48. My thanks to Dr Chris Whatley, of the Department of Modern History, University of Dundee, for this and much of the following detailed information.

49. ER, xi, 222; xx, 210.

50. However these accounts not only use different units for measuring the salt they also charged exceptionally high duty on it, which might suggest that it was reexported salt, or even salt refined in Scotland carrying something like a value-added tax. ER, xx, 298, 315.

51. ER, vii, 36, 289.

52. ER, ix, 293.

53. ER, x, 55; xv, 52.

54. ER, xix, 194; xx, Inverkeithing. For some reason in 1537 only Dundee used this rate.

55. ER, xx, 311.

56. RCRB, i, 76; Lythe, Economy of Scotland, 147.

57. Dow, "Scottish trade with Sweden 1512-80", 71. Comparison of figures is impossible also because the Scottish data is so poor.

58. These calculations are approximate. Without better evidence, such as the size of the chalder used for customs purposes one chalder has been taken as the equivalent of one last. T.C. Smout, "Overseas Trade of Scotland 1660-1707", Cambridge University Ph.D. thesis, 1959, 96, note 2. This applies also to Professor Lythe's figures for trade with the Baltic, below. This is not entirely satisfactory as in Professor Smout's reference the chalder or last contains 21, not 16 bolls, and elsewhere the last is said to have weighed 4000 lbs. whereas Dr. Whatley advises that a chalder was 1 1/4 - 1 1/2 tons, i.e. 2800-3360 lbs. RCRB, Index, Glossary: Last.

59. Lythe, Economy of Scotland, 237, 240.

60. RCRB, i, 380; APS, II, 346.

61. Lythe, "Scottish trade with the Baltic", 66.

62. Ibid., 74, using the corrected figures.

63. S.G.E. Lythe, "Scottish trade with the Baltic 1550-1650", in: J.K. Eastham, ed., Economic Essays in Commemoration of the Dundee

School of Economics 1931-1955 (Dundee, 1955), 76.

64. S.G.E. Lythe, "Economic Life", in: J.M. Brown, ed., Scottish Society in the fifteenth century (London, 1977), 78.

Chapter Seven

Conclusions

The custumar's accounts used in this thesis contain an immense amount of information, most of which can be broadly divided into three categories. Firstly, from studying closely the figures for individual commodities over so long a period, it is possible to discern patterns of development in the different branches of overseas trade. Secondly, every exporting burgh, in its geographical location, can be evaluated not only according to its overall contribution, but also for its level of development and specialisation. Thirdly, Scotland's export trade can be understood in terms of revenue generated, from the point of view of the crown. Over the 140 year period one of the remarkable things that has been revealed about Scotland's export trade is that from the point of view of revenue generated, the amount remained more or less unchanged for over 130 years, until part way through the final decade (Figure 7.1). Not until 1597 did the total revenue make a significant move upwards, and 1598 was the outstanding year of the whole period. Almost the only occasions when the total revenue fell below £2000 were those years for which the record is missing or badly deficient in some way (Figure 7.1 and 7.1.a). Although it may be the case that customs revenue dropped at these times, this cannot be determined one way or the other from the custumars' records alone.

Apart from these instances, from 1460 until the late 1530s the annual totals generally hovered between £3000 and £4000, though the decade 1484-1494 is at a somewhat lower level and in the aftermath of Flodden there were some bad years that cannot be explained by missing records. From 1535 until 1542 revenue suddenly climbed from £4000 to

almost £6000, then collapsed in 1543: the high levels of 1539 and 1541 were not achieved again until the 1590s. In 1544 began the onslaught of the "Rough Wooing", and Edinburgh was overrun by an English army led by the Earl of Hertford.(1) This immediately shows up in the records: the custumars were unable to get their accounts audited in Edinburgh in the summer of 1544 (Figures 1.a-1.d). However, Scottish overseas trade had already slumped - in 1543 - before the English invasion began, and if the "Rough Wooing" can be blamed for disrupting the Exchequer audit, it cannot be held responsible also for the sharp contraction of Scottish trade following the 1539-42 boom.

The records improve 1551-1565, but for only one year, 1558, did the total revenue exceed £4000. From the mid-1560s until the early '70s the record is again poor, but from 1574 until the break after 1582 the revenue generated from customs duty was at a slightly higher level than previously, just exceeding £4000 for most years and well over £5000 in 1582. After the break - during which the whole customs were farmed for £4000 per annum - revenue remained just below the level of the late 1570s. It seems that the amount set for the farm of the customs was a realistic one, somewhere between the "real" totals arrived at for the immediately preceeding and succeeding years. It was only from 1593 onwards that total revenue levels seriously changed, exceeding £6000 by 1594, £8000 by 1597, almost £12000 by 1598, and back to just under £8000 for the last year. Only in 1596 did the revenue total as little as £4000, a year for which Edinburgh has a short account.

When one considers that the pound Scots was worth one thirteenth at the end of the sixteenth century of what it had been at the beginning, it is clear that the crown was a heavy loser.(2) The duty was levied pro rata, and the rates of duty were either increased at a rate much below inflation, or not adjusted at all. Even the sharp increase on some commodities at the very end of the 1590s did not compensate: the crown received less income in real terms from the customs in the late 1590s than it had back in the 1460s.

Because the relative rates of duty on different commodities were not changed sharply over the period (except for some new types of cloth, wool and salmon, at the very end) it is possible to examine the structure of the export trade by comparing the amount of revenue generated by individual commodities. Figure 7.3 shows that initially the export of raw wool was of the greatest significance. In the 1460s the revenue from wool exports alone was almost five times as much as all other commodities combined (Figure 7.4). Within forty years the gap had narrowed, and during the first decade of the sixteenth century duty from wool exports fell to less than 50 percent of the total revenue. After the 1530s wool exports dropped more sharply, and from then onwards proved less and less significant as other commodities grew more so. From the 1540s raw wool in sacks was exported from Edinburgh alone, with other burghs no longer involved in the trade (Figures 3.3 and 3.4).

The export of wool fells followed a pattern almost the reverse of that for raw wool, it began modestly and grew steadily, with a tremendous rise at the very end, 1597-99 (Figures 4.5 and 4.6). Its contribution to customs revenue was second only to that of wool. In third place was woollen cloth, confirming yet again the importance of sheep in the Scottish export economy as the top three commodities were all sheep-based (Figures 7.3 and 7.5). Not only this, but as has already been shown in Chapter Four, most of the groups of skins, together ranked sixth, were from lambs or adult sheep. The export of raw wool in sacks fell long before they became restricted through legislation, possibly because Scottish wool (of low quality) was being displaced by alternative supplies of higher quality wool from Spain or elsewhere, and the figures reflect this. Supplies of raw wool from England were also dwindling.(3) The Scottish merchants may have found a way of circumventing their market difficulties and ultimately the export ban on wool to their considerable profit, by exporting the wool still attached to the sheep's skin. Hence the figures for exports of wool in sacks went down, as those for exports of fells increased, although the quantities of wool involved were not directly comparable, of course, as a single sheep could be sheared annually whereas it provided only one woolfell.

Analysis of the structure of Scottish overseas trade by burgh reveals the consistent and increasing dominance of Edinburgh (Figure 7.2) which alone accounted for 60 percent of all customs revenue over the period.(4) This dominance applied unvaryingly over time but not for every commodity, for example Aberdeen and the Pittenweem group were the top exporting burghs for salmon and herring respectively (Figures 5.3 and 5.7). Second-, third-, and fourth-ranked burghs were Aberdeen, Dundee, and Pittenweem, which accounted for roughly 12, 6, and 4 percent respectively of the total revenue over the period. Revenue from the rest of the small burghs combined was greater than from these three individually, but slightly less than from the three combined. By comparison with Edinburgh, they were all small burghs (Figure 7.2).

In seeking to understand the development of Scotland's export trade over this long period it may be helpful to consider what changes were ocurring in England at the same time. The export of wool, which had long been the basis of English overseas trade, contracted to the point of collapse in the 1520s. Apart from woollen cloth, other commodities such as tin, lead, fish or skins, were exported only in small quantities. So for most of the sixteenth century the cloth trade provides the best indicator of the development of English trade.(5)

By the mid-century the European market was over-supplied with English broadcloths and trade slumped. Scottish cloth exports suffered similarly at about the same time.(6) The English took steps to retrieve the situation by seeking out new markets and by diversifying into new types of cloth, the "new draperies". The information gained from the custumars' accounts provide some clues as to how the Scots coped with a changing export market. The Figures provided in this thesis indicate that they grasped the problem in two stages. By the mid sixteenth century efforts were made to compensate for the fall in wool and cloth sales by exporting larger quantities of some other traditional commodities. In the '70s this policy was renewed, plus diversification into new markets with goods which were not previously a part of Scotland's export trade, except perhaps on a very small scale. It was not so much a policy as a complex response by producers and traders to the changing market situation.

Some of the long established commodities were not amenable to change, or were influenced by other factors which the Scots merchants were unable to control. It was not until the 1590s that they were able to extend the types of cloth available for export, as England had done, beyond the traditional broad or narrow. Chapter Three examines the quantity and variety ot these new cloths, and although limited they carried a significantly higher rate of duty, sufficient to make a noticeable difference to the total revenue for that decade, but not before (Figure 7.5). Export levels of hides remained relatively unchanged throughout the period, although there was an increasing concentration on Edinburgh at the expense of the smaller burghs

(Figure 4.3). Salmon exports declined towards the end of the period, and a late attempt to increase revenue from them by raising the rate of duty, similarly to woollen cloth, did not take effect until 1598 (Figure 5.2).

However, the export of fells, second only to wool over the period, grew most rapidly from the mid-century onwards. The possible substitution of fells for wool in sacks to supply the European market has already been suggested. Exports of herring certainly were expanded from the 1540s onwards to levels considerably above those previously (Figure 5.6). The same is true of cod, although the boom period was over by 1582 (Figure 5.9). At the same time - from 1550 - exports of whiteskins suddenly took off after nothing but a tiny amount exported in 1511, and climbed sharply through to the end of the century. However, although by the 1590s 12,000 whiteskins were leaving Scotland annually - and in the boom year 1598, over 18,000 - the amount of revenue this generated was not really very great, around £14 in the 90s and only £26 in 1598 (Figure 4.3/6).

In fact the groups of exports included within the category of skins performed in quite different ways. Overall they showed a marked expansion from the 1570s onwards, and may be thought a part of the second phase of development (Figure 4.9). But this was not the case for all the different types of skins. The export of whiteskins expanded twenty years earlier, as already described. Some of the larger, established groups such as schorlings, scaldings and futefells appeared only marginally responsive to the overall trend in skins, and lentrinware had almost disappeared by the 1520s. A number of small

groups of skins were exported in large quantities only in the 1590s, for reasons examined in Chapter Four. But some groups, most notably lambskins, were developed so rapidly in the 1570s that this trend was imposed upon the Figures for skins overall (Figures 4.9, 4.17, 4.37).

Most interesting of all were exports of coal and salt which both expanded massively in the 1570s, the second growth phase. It may be the case that the Scots had perceived the need to develop the export potential of both these commodities before then, but the necessary capital investment - particularly in the case of coal, without which salt production could not advance - involved a time lag between initial planning and financial return. The expansion of these two commodities within Scottish overseas trade is significant, even though at that time their relative contributions to the total customs revenue were modest, in that they indicate that Scotland's export trade was capable of being innovative and responsive to pressures within the European market economy.

So the general picture of Scottish trade which emerges from a detailed breakdown of the composition of the export package is one of much greater change than was apparent from studying the totals of customs duties paid. It is often regarded as a sign of strength in the English economy that her merchants and seamen (especially those of London) were able to respond to the acute difficulties of the mid-sixteenth century crisis by diversifying into new markets and new products, thus ultimately turning the apparently crushing blow of the collapse of the Antwerp market into an advantage. After several decades of difficult adjustment, English trade emerged stronger and

more broadly based than before.(7) The main finding of this study is that Scotland found itself in a comparable position, and structural changes to its trade, albeit on a smaller scale, by 1600 were no less successful. Scotland's industrial base was more backward, and in particular it was weaker through lack of a really important and well-established cloth trade. Scotland's military might was much less, and the possibility of a non-European trade therefore hardly arose (although it hardly arose, despite the sea-faring tradition, in England before the seventeenth century). But within these constraints and on a smaller stage, the merchants of Edinburgh and the other Scottish east coast burghs did well.

NOTES

1. G. Donaldson, Scotland: James V - James VII (Edinburgh, 1978), 27; M. Lynch, Edinburgh and the Reformation (Edinburgh, 1981), 68.

2. A.L. Murray, "The Exchequer and Crown Revenue of Scotland", Edinburgh University Ph.D. thesis, 1961, 66.

3. J. Israel, "Spanish wool exports and the European economy, 1610-40", Economic History Review, xxxiii (1980), 193. See also Appendix B.

4. See also M. Lynch, Edinburgh and the Reformation.

5. R. Davis, English Overseas Trade 1500-1700 (London, 1973), 11.

6. Appendix C and Figure 3.5.

7. D. Coleman, The Economy of England, 1450-1750 (Oxford, 1977), 61-65.

APPENDIX A

Notes on the Classification chart

The custumars' accounts are not exactly straightforward to use as a data source. Dividing the accounts into seven different categories was a decision taken after having looked at every one of them, and still one group had to be "irregular". For all the regular, long and short accounts, the figures are perfectly adequate, as four months leeway over the summer was normal. Details of the methods used and of the different categories of accounts are given in Chapter One. But the custumars' accounts have gaps and inconsistencies, and frequently decisions were taken or calculations made which require reference.

Throughout, where a commodity had an established customs rate, if either the quantity or the duty were missing, the amount was supplied and included in the figures. If both duty and quantity were missing, there was no usable information.

Figures 1.a - 1.d indicate that the more minor burghs tended to have the worst kept accounts. In some cases where a minor burgh has a small consignment of a commodity which appears infrequently, yet its account is an averaged series, the item has been assigned to just one year. For example in 1550 Kinghorn rendered an account which covered the previous eight years and included a small amount of coal. Consistency - dividing 18 chalders between eight years - in this case would give perhaps an unjustified impression of regular shipments, and so all 18 chalders were assigned to one year, 1546, it being impossible now to discover when the coal was shipped (ER, xviii, 120).

1460
INVERNESS vi, 589
1 July 1450 - 1 July 1460
AYR vi, 591
1 July 1458 - 1 July 1460
DUMBARTON vi, 591 .b
11 July 1457 - 2 July 1460

1461
DUNDEE vii, 28, 139
26 July 1460 - 7 March 1460/1, 7 March 1460/1 - 6 July 1462
MONTROSE vii, 29, 141
25 July 1460 - 13 March 1460/1, 13 March 1460/1 - 6 July 1462
LINLITHGOW vii, 37, 153
3 Aug 1460 - March 1460/1, 12 March 1460/1 - 13 September 1462
PERTH vii, 38
21 July 1460 - 18 March 1460/1
STIRLING vii, 37
charge side of acount is illegible

1462
STIRLING vii, 138
19 March 1460/1 - 26 October 1462
EDINBURGH vii, 129
a separate, and irregular, account for woollen cloth, salt, and salted salmon, 21 March 1460/1 - 5 November 1461.

1464
DYSART, vii, 286
no starting date.
EDINBURGH, vii, 298
the salt in the first half of the account has not been included because it is the same salt as in the Dysart account, vii, 286.

1465
KIRKCUDBRIGHT, vii, 369
bad arithmetic by the Exchequer clerks, the total without arrears should read £45 16s 8d.

1468
CUPAR, vii, 585-6
two accounts overlap, 5 June 1467 - 10 March 1467/8 and 10 June 1467 - 4 July 1468.

1476
WIGTON, viii, 235
28 January 1475/6 - 3 July 1476.
BERWICK-ON-TWEED, viii, 388
27 April 1476 - 28 July 1476.

1481
CAITHNESS, ix, 152
no starting date.

1482
BANFF, ix, 203
28 July 1481 - 17 March 1482/3.

1485
AYR, ix, 340-1
no starting or finishing dates given.

1488
EDINBURGH, x, 57, 61
there is a break in the account from March - May 1488.
HADDINGTON, x, 133
should read £8 19s not £81 9s.

1490
AYR, x, 233
the account forms an averaged series covering three years, but the Exchequer Roll notes that all the exports were shipped during the last two years of the account, and so the figures were divided between 1489 and 1490 only.

1492
CRAIL, x, 355
no starting date, so have assumed the account covers two years.

1496
ABERDEEN, x, 611
29 November 1495 - 20 July 1496
MONTROSE, x, 611
26 December 1495 - 15 July 1496

1498-1502
DUNBAR, xii, 81, 268
two accounts overlap, July 1498 - July 1502 and July 1498 - June 1504.

1499
irregular accounts: INVERKEITHING, xi, 221, 262, 368; EDINBURGH, xi, 230, 375; DYSART, xi, 222, 268, 369.

1501
HADDINGTON, xi, 366
6 November 1500 - 22 June 1501.

1504
EDINBURGH, xii, 262
the Exchequer Roll omits the word "herring". 1507
DUMFRIES, xii, 468, 597
no starting date.

1525
HADDINGTON, xv, 179
woolfells duty given as £25 5s, should be £5 5s.

1528
DUNDEE, xv, 440
quantity of salmon given as 8 lasts 9 barrels, should be 28 lasts 9 barrels.

1577
DUNDEE, xx, 272

quantity of salmon given as 13 lasts 18 1/2 barrels, should be 13 lasts 8 1/2 barrels.

1592
EDINBURGH, xxii, 248
ER reads 902 lasts of herring, pays £55 4s, should read 92 lasts, for that duty at the current rate.

APPENDIX B

Scottish wool exports as a percentage of English wool exports(1)

YEAR	SC.FELLS in sacks(2)	SC.SACKS	SC.TOTAL in sacks	ENG.TOTAL in sacks	SC.%ENG.
1460	175.0	1296.18	1471	(3)	
61	80.1	1353.06	1433	(3)	
62	239.1	2278.79	2518	(3)	
63	130.9	2416.52	2547	5478.0	46.5
64	235.0	2461.09	2696	8408.0	32.06
65	224.0	1951.5	2176	7342.0	29.64
66	169.5	1309.58	1479	8046.0	18.38
67	138.5	2058.16	2197	9948.0	22.08
68	147.7	2341.65	2489	9371.0	26.56
69	190.6	1948.79	2139	9676.0	22.11
1470			(4)	9570.0	
71	106.5	1305.82	1412	(5)	90.57
72			(4)	12274.0	
73	197.4	1591.15	1789	7444.0	24.03
74	244.6	1996.93	2242	9977.0	22.47
75	200.9	2096.58	2297	8867.0	25.91
76	297.1	1785.14	2082	14437.0	14.42
77	269.6	1411.39	1681	3005.0	55.94
78	176.9	627.05	804	8668.0	9.28
79	273.0	1342.44	1615	10648.0	15.17
1480	212.4	1636.06	1848	8715.0	21.2
81	121.5	905.47	1027	11382.0	9.02
82	315.1	1114.25	1429	9022.0	15.84
83	250.5	1306.45	1557	4747.0	32.8
84	210.6	1092.84	1303	6646.0	19.61
85	202.2	907.19	1109	6012.0	18.45
86	148.7	908.79	1057	9199.0	11.49
87	271.1	1109.22	1380	9459.0	14.49
88	253.6	1245.41	1499	10079.0	14.87
89	159.0	950.64	1110	9804.0	11.32
1490	216.4	1060.02	1276	10490.0	12.16
91	180.5	828.34	1009	3454.0	29.21
92	195.6	960.18	1156	4144.0	27.9
93	168.2	1211.92	1380	6859.0	20.12
94	180.7	781.8	963	8009.0	12.02
95	250.4	1551.68	1802	11340.0	15.89
96	207.3	1231.34	1439	12629.0	11.39
97	196.1	850.26	1046	8819.0	11.86
98	351.2	1176.59	1528	9819.0	15.56
99	227.8	1201.27	1429	6261.0	22.82
1500	218.2	1367.18	1585	6728.0	23.56
01	255.8	1192.11	1448	7399.0	19.57
02	234.3	1364.59	1599	9470.0	16.88
03	261.3	1669.01	1930	8898.0	21.69
04	176.7	994.46	1171	6066.0	19.3
05	193.7	1173.55	1367	7594.0	18.0
06	192.3	1290.19	1483	4740.0	31.29
07	188.5	1299.29	1488	7061.0	21.07
08	175.1	1089.17	1264	9088.0	13.91
09	153.7	1153.67	1307	7839.0	16.67

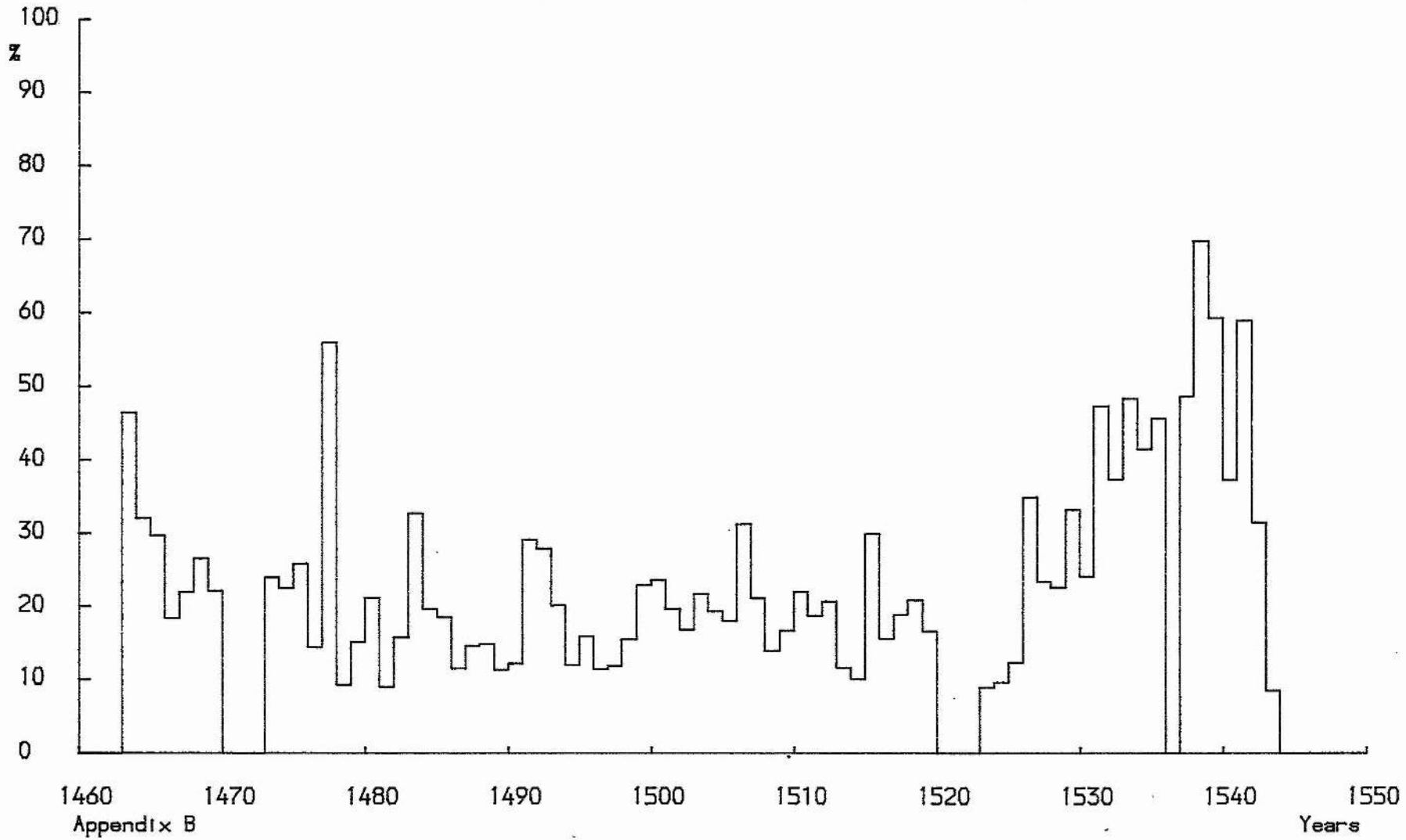
1510	305.0	1535.34	1840	8364.0	21.1
11	267.2	1315.59	1583	8435.0	18.77
12	239.9	1013.08	1253	6053.0	20.7
13	103.6	522.46	626	5391.0	11.61
14	196.0	549.91	746	7379.0	10.1
15	341.9	1633.01	1975	6581.0	30.02
16	297.3	859.57	1167	7467.0	15.63
17	346.0	992.05	1338	7068.0	18.93
18	387.9	1010.84	1399	6678.0	20.95
19	451.4	1233.37	1685	10169.0	16.57
1520			(6)	9555.0	
21			(6)	7555.0	
22			(6)	4820.0	
23	256.5	194.84	451	5015.0	9.0
24	256.5	194.84	451	4633.0	9.73
25	255.9	169.96	426	3433.0	12.41
26	400.0	1217.04	1617	4613.0	35.05
27	478.7	1108.14	1587	6783.0	23.4
28	320.2	861.62	1182	5226.0	22.62
29	245.0	781.58	1027	3085.0	33.3
1530	320.0	758.26	1078	4467.0	24.13
31	284.6	1016.72	1301	2746.0	47.38
32	263.5	846.67	1110	2966.0	37.42
33	180.1	804.01	984	2033.0	48.4
34	354.0	1151.47	1505	3620.0	41.57
35	324.5	1348.24	1673	3661.0	45.7
36			(7)	4632.0	
37	380.8	1224.08	1605	3295.0	48.71
38	517.3	1530.37	2048	2933.0	69.83
39	609.3	1858.67	2468	4161.0	59.31
1540	382.4	1388.34	1771	4736.0	37.39
41	530.0	2181.75	2712	4593.0	59.05
42	498.0	1200.58	1699	5397.0	31.48
43	81.8	236.92	319	3738.0	8.53
44	158.2	455.37	614	(8)	

These figures have been compiled in an effort to further our understanding of Scotland's place within the European market as a supplier of raw wool. The Scottish figures expressed as a percentage of those for England as provided by Carus-Wilson and Coleman, provide us with some indication of their relative strengths, and whether, and if so in what way, these changed over time. The approximate nature of the results must be stressed. Many assumptions have been made, and there are several gaps. I have not provided a percentage figure for those years in which the account is not reasonably good for both Edinburgh and London. The reliability of the Scottish figures is dealt with elsewhere in this thesis.(9)

With relevant reservations in mind, we can see from the graph that from the 1480's until the 1520's, Scotland was exporting between approximately 15-20 percent of the quantity that was leaving England. If we consider the relative sizes of population, reckoned at about 5:1 England to Scotland, then the clear suggestion is that Scotland was able to hold on to relatively as large a share of the market for wool as England.

From the 1520's until the early 1540's Scotland's share increased, to a peak of over 68 percent in 1538. England's wool exports had declined since the end of the fifteenth century, supplies diverted to meet the needs of domestic cloth manufacture. Over the twenty years exports of both wool and fells from Scotland noticeably increased. Scotland is found in the promising position of a not

inconsiderable supplier of the raw material to Europe, until the pattern was abruptly broken in 1543 when the Scottish figures collapse. Until then Scotland had been exporting 40-50 percent of the quantity leaving England, that is, almost one third of the supplies of raw wool available to Europe from Great Britain originated in Scotland.


Scottish wool exports as a percentage of English wool exports
100
%
90
80
70
60
50
40
30
20
10
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
Years

Appendix B

NOTES

1. Wool exports here means both raw wool and woolfells.

2. To convert Scottish woolfells to sacks of wool the English practice has been followed of reckoning 240 fells to one sack. E.M. Carus-Wilson and O. Coleman, England's Export Trade, 1275-1547 (Oxford, 1963), 13 and n. 5.

3. London's account not usable 1460, 1461 and 1462, ibid., 64.

4. Exchequer roll missing for 1470 and 1472.

5. London's account not usable 1471, ibid., 66.

6. Edinburgh's account not usable for 1520, 21, 22.

7. 1536 Exchequer roll missing.

8. London's account not usable 1544, ibid., 74.

9. See Chapter One.

APPENDIX C

Scottish cloth exports as a percentage of English cloth exports

YEAR	SC.BROAD	50%	SC.NARROW	20%	SC.TOTAL "ASSIZE"	ENGLISH "ASSIZE"	SC.%ENG.
1460			1319.5	263.9	263.9	26204	1.0
61	26.5	13.25	1147.1	229.4	242.7	30761	0.79
62	24.5	12.25	2564.1	512.8	525.1	39000	1.35
63			3609.7	721.9	721.9	25482	2.83
64			3606.6	721.3	721.3	36344	1.98
65	20.0	10.0	4130.2	826.0	836.0	15785	5.3
66	600.0	300.0	3623.6	724.7	1024.7	33917	3.02
67			3568.5	713.7	713.7	41872	1.7
68			3431.2	686.2	686.2	39076	1.76
69	298.6	149.3	1158.2	231.6	380.9	42944	0.89
1470					(1)		
71	165.5	82.6	2624.8	524.9	607.7	27522	2.21
72					(1)		
73	457.5	228.8	3330.7	666.1	894.9	35192	2.54
74	639.2	319.6	4999.0	999.8	1319.4	43548	3.03
75	411.3	205.6	4197.3	839.5	1045.1	31171	3.35
76	561.2	280.6	3800.8	760.2	1040.7	32963	3.16
77	634.8	317.4	4441.7	888.3	1205.7	46001	2.62
78	427.0	213.5	4573.2	914.7	1128.2	39048	2.89
79	709.7	358.8	4390.2	878.0	1236.9	67270	1.84
1480	795.5	397.8	3640.8	728.2	1125.9	56604	1.99
81	307.5	153.8	2454.7	490.9	644.7	64084	1.00
82	926.6	463.3	2302.8	460.6	923.9	66958	1.38
83	313.0	156.5	3374.8	674.9	831.5	35019	2.37
84	175.5	87.8	1342.6	268.5	356.3	50846	0.7
85	334.8	167.4	1133.3	226.7	394.1	46714	0.84
86	148.5	74.3	1562.3	312.5	386.7	57282	0.68
87	228.5	114.3	2038.8	407.8	522.0	33529	1.56
88	354.3	177.2	2745.2	549.0	726.2	47564	1.53
89	551.5	275.8	3206.5	641.3	917.1	53521	1.71
1490	307.0	153.5	3743.7	748.7	902.2	58378	1.55
91	348.5	174.3	3458.0	691.6	865.9	56057	1.54
92	458.0	229.0	5720.0	1144.0	1373.0	54695	2.51
93	617.2	308.6	5139.3	1027.9	1336.5	55271	2.42
94	578.9	289.5	3404.3	680.9	970.4	59533	1.63
95						(2)	
96						(2)	
97	665.0	332.5	3122.5	624.5	957.0	57760	1.66
98	934.0	467.0	6446.7	1289.3	1756.3	62228	2.82
99							
1500							
01	560.3	280.2	4323.0	864.6	1144.8	82600	1.39
02							
03	1376.5	688.3	4828.5	965.7	1653.9	76182	2.17
04	1603.7	801.8	3425.3	685.1	1486.9	75239	1.98
05	1260.2	630.9	3584.4	716.9	1347.7	68296	1.97
06	503.8	251.9	5633.7	1126.7	1378.6	77998	1.77
07	176.2	88.1	4448.5	889.7	977.8	83386	1.17
08	263.3	131.6	5223.5	1044.7	1176.3	93783	1.25

09			6012.6	1202.5	1202.5	90477	1.33
1510	936.0	468.0	6553.3	1310.7	1778.7	76123	2.34
11	1363.5	681.8	5822.3	1164.5	1846.2	85474	2.16
12	1590.0	795.0	2921.5	584.3	1379.3	74796	1.84
13	1328.0	664.0	3921.7	784.3	1448.3	84273	1.72
14	881.0	440.5	3934.9	786.9	1227.5	90836	1.35
15	957.0	478.5	5074.5	1014.9	1493.4	90993	1.64
16	1014.5	507.3	5570.1	1114.0	1621.3	81823	1.98
17							
18	1965.7	982.8	6426.3	1285.3	2268.1	91765	2.47
19	864.0	432.0	10312.9	2062.6	2494.6	91153	2.74
1520					(3)	98267	
21					(3)	75583	
22					(3)	61765	
23	379.5	189.8	3149.9	629.9	819.7	86061	0.95
24	415.5	207.6	2960.0	592.0	799.8	90294	0.89
25	894.0	447.0	8171.3	1634.3	2081.3	96231	2.16
26	2101.8	1050.9	7611.0	1522.2	2573.1	91391	2.82
27	1131.5	565.8	8419.0	1683.8	2249.6	91140	2.47
28	1428.5	714.3	7328.0	1465.6	2179.9	99582	2.19
29						(4)	
1530	986.0	493.0	5078.0	1015.6	1508.6	90428	1.67
31	1009.0	504.5	5307.0	1061.4	1565.9	86661	1.81
32	971.0	485.5	5734.0	1146.8	1632.3	81818	2.0
33	764.8	382.8	5558.3	1111.7	1494.4	100030	1.49
34	1255.8	627.9	6556.3	1311.3	1939.1	110348	1.76
35	994.5	497.3	7508.0	1501.6	1998.9	91631	2.18
36					(5)		
37	1238.5	619.3	9174.0	1834.8	2454.1	103050	2.38
38	1239.7	619.8	10103.7	2020.7	2640.6	103754	2.55
39	1620.5	810.3	11313.0	2262.6	3072.9	113883	2.7

These figures have been compiled for the same purpose as those for exports of raw wool: to assist in placing the Scottish woollen cloth trade to Europe into a regional perspective, by comparing it with that of England.(6) As before, a percentage figure has not been calculated for those years in which either Edinburgh or London did not have a reasonably good account. The different sizes of English and Scottish cloths meant that a straightforward comparison of numbers of cloths would have been quite misleading, and a method was devised of converting Scottish cloths into the standard English "cloth of assize". Lack of definitive information on the dimensions of the cloths dealt with here, means that the results can provide at best only an indication of the relative strengths of the cloth trades of the two countries.

The English figures are presented throughout in cloths of assize, as cloths of different sizes were converted for customs purposes into this standard measurement. The cloth of assize was double width, 1.5-2.0 yards wide, and 24 yards long.(7) The Scottish cloth was approximately half this length. Each cloth from Scotland was reckoned a "dozen", being 12 ells long, the ell measuring 37 inches.(8) The difficulties arise from not knowing the exact widths of the Scottish cloths. Here, assumptions have had to be made, and the strength of the results depends largely on how far these assumptions are judged to be valid.

It has already been demonstrated that Scottish cloth came in two sizes, broad and narrow, as indicated by the amount of duty paid on each dozen.(9) To determine how much of each size was exported every year, those burghs which paid £0.06 (i.e. over 1s 6d) or over per dozen were deemed to be dealing with broad cloth, and those which paid less than £0.06 per dozen, narrow cloth. It was not until the third decade of the sixteenth century that the two rates clearly divided into 2s 6d (£0.125) per dozen broad cloth, and 1s (£0.05) per dozen for narrow, and before then it appears likely that broad cloth paid a rate lower than £0.125.(10) Also, burghs exported cloths of varying sizes.(11) To allow burghs which exported mainly narrow cloth, but some broad, and thus with an average rate of just over £0.05 per dozen, and for those which exported mainly broad cloth but some narrow, thus reducing the average rate per dozen, the division was made at £0.06. From this, separate totals for broad and narrow cloth were calculated for each year.

There still remained the question of how these widths compared to the width of a cloth of assize. A Scottish broad cloth was taken to be the same width as an English broad cloth, thus two Scottish broad cloths are the equivalent of one English, being half its length. Lacking any clearer evidence as to the width of a narrow cloth, it was taken to be 2/5 of a broad cloth based on the relative amounts of duty paid. Thus five Scottish narrow cloths are reckoned the equivalent of one English broad cloth.


Scottish cloth exports as a percentage of English cloth exports
%
10
9
8
7
6
5
4
3
2
1
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
Years

Appendix C

The results thus calculated reveal that Scotland was exporting only around 2 percent of the quantity of cloth exported by England over the period. It is possible that this represents a constant trickle of English cloth smuggled over the border and re-exported, as the English frequently complained was taking place. This would imply that the Scots produced only enough cloth to meet their own needs, with no surplus for export, and that all the cloth referred to in the custumars' accounts was not Scottish made at all. However, the evidence of the Exchequer accounts themselves does not support this idea. Firstly, the disparity in cloth sizes (most English cloth exports in long, broad pieces and most Scottish cloth exports in short, narrow pieces) (12) raises the unlikely picture that nearly all cloth from Scotland was smuggled English cloth but only in irregular sizes. Secondly, certain accounts specifically detail the export of English cloth, and where the quantity of cloth and duty paid is recorded, the rate of duty levied was considerably higher than the current Scottish rates for either broad or narrow cloth.(13)

Scottish cloth exports during this period, expressed as a percentage of English cloth exports, clearly fell short of English production relative to the population totals.(14) In general terms, it could be described as one tenth as important in Scotland as it was in England. This is in sharp contrast to the relative standing of wool at the same time (see Appendix B).

NOTES

1. Exchequer rolls missing for 1470 and 1472.

2. London's account missing, 1495 and 1496.

3. Edinburgh's account missing, 1520, 1521 and 1522.

4. Edinburgh's account covers only five months.

5. Exchequer roll missing for 1536.

6. English cloth export figures provided by Carus-Wilson and Coleman, England's Export Trade 1275-1547 (Oxford, 1973), 100-118.

7. Ibid., 13.

8. J.M. Henderson, Scottish Reckonings of Time, Money, Weights and Measures, Historical Association of Scotland pamphlet, new series, 4, (1926), 13.

9. See Chapter Three.

10. E.g. Linlithgow in 1512 paid 1s 6d per dozen for broad cloth. ER, xiii, 480.

11. E.g. 1475: Dundee, Inverkeithing, ER, viii, 314, 316.

12. English Broad Cloth = 24 yards length
Scottish Broad Cloth= 12 ells length
" Narrow Cloth= 12 ells length 1 ell = 37 inches
Edinburgh exported mainly narrow cloth, and so the dominance of Edinburgh in Scottish cloth export ensured that narrow cloth was the majority.

13. See Chapter Three.

14. Scottish cloth exports, 2 percent of English
Scottish population, 20 percent of English, see Appendix B.

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(wool and the rest)
7.5 Total Exports 1460-1599 Revenue Decade Mean
(the rest)

Figure 1a Classification chart (% of Total Export Revenue)

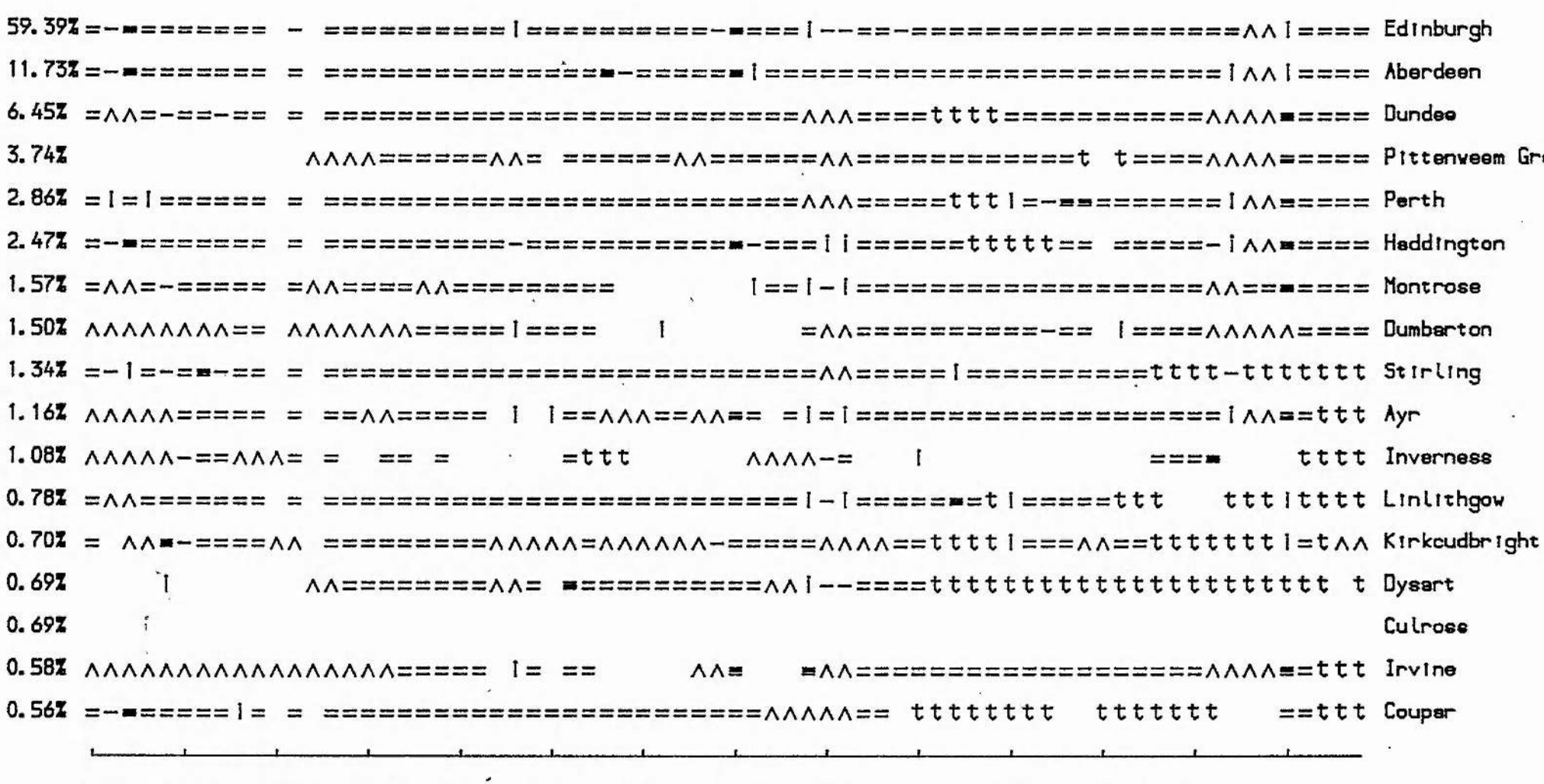

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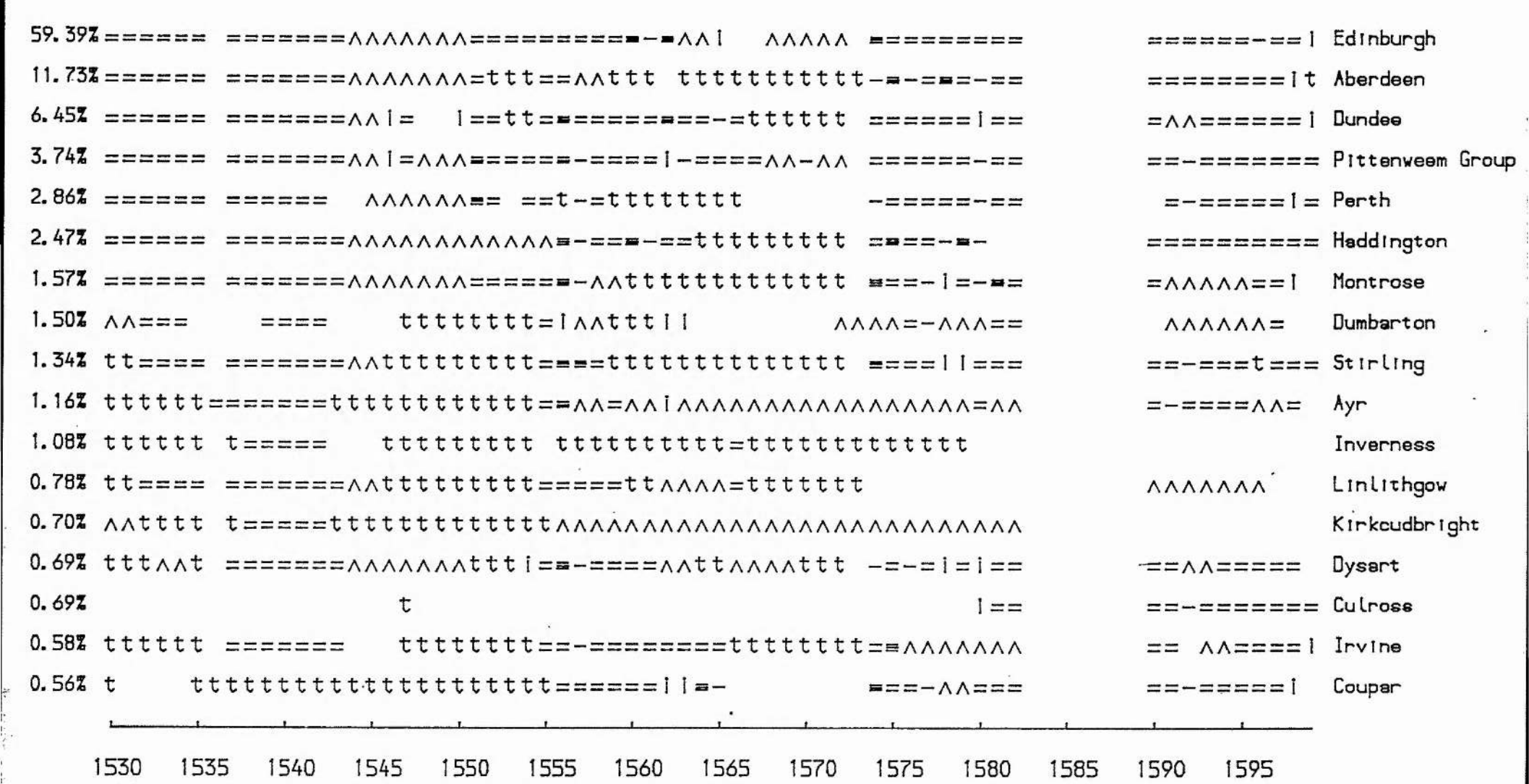
Figure 1.b Classification chart (% of Total Export Revenue)



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^^ : averaged series t : tack accounts I : irregular accounts

Figure 1.c Classification chart (% of Total Export Revenue)

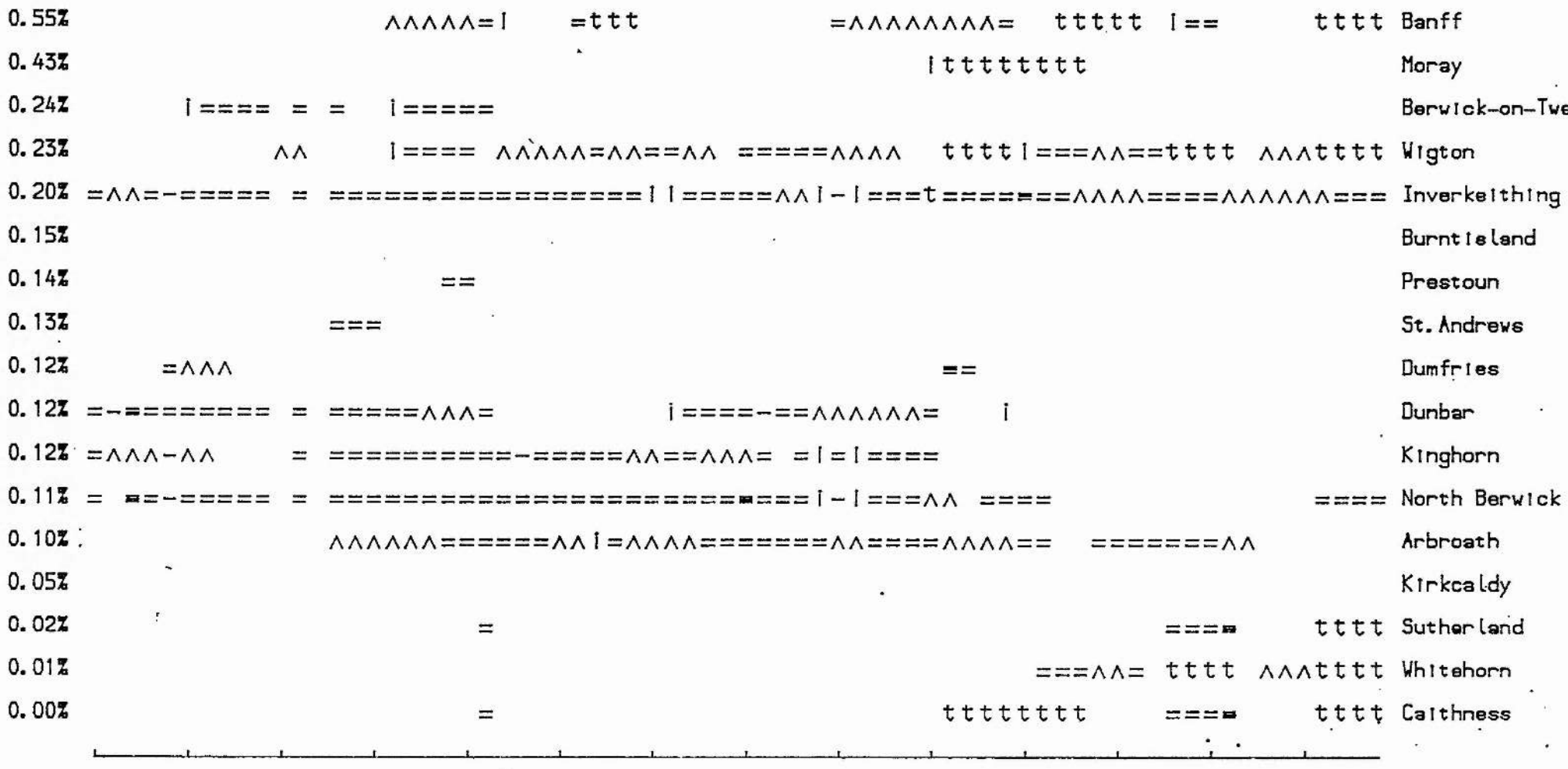

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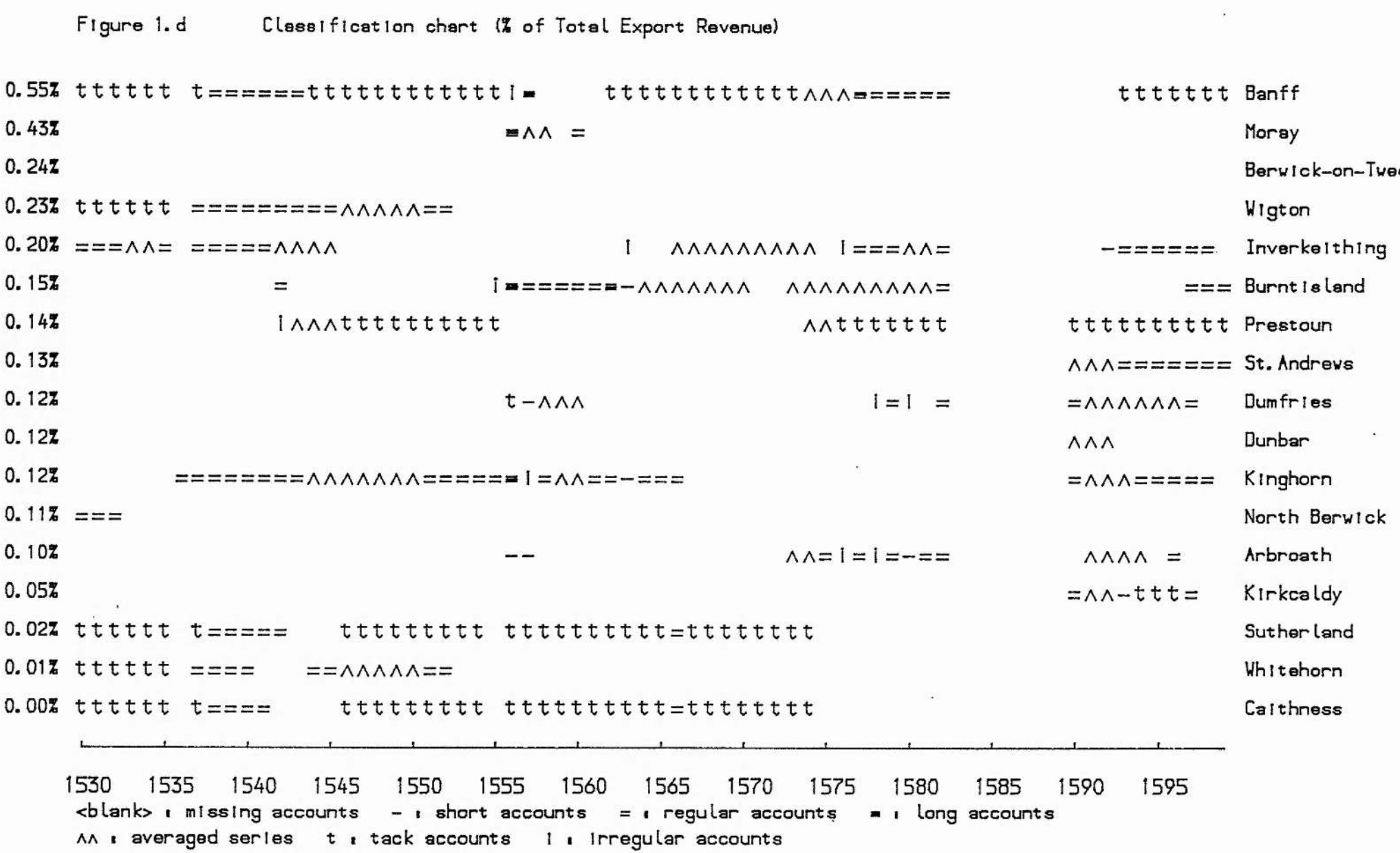
Figure 1.d Classification chart (% of Total Export Revenue)



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^^ : averaged series t : tack accounts I : irregular accounts

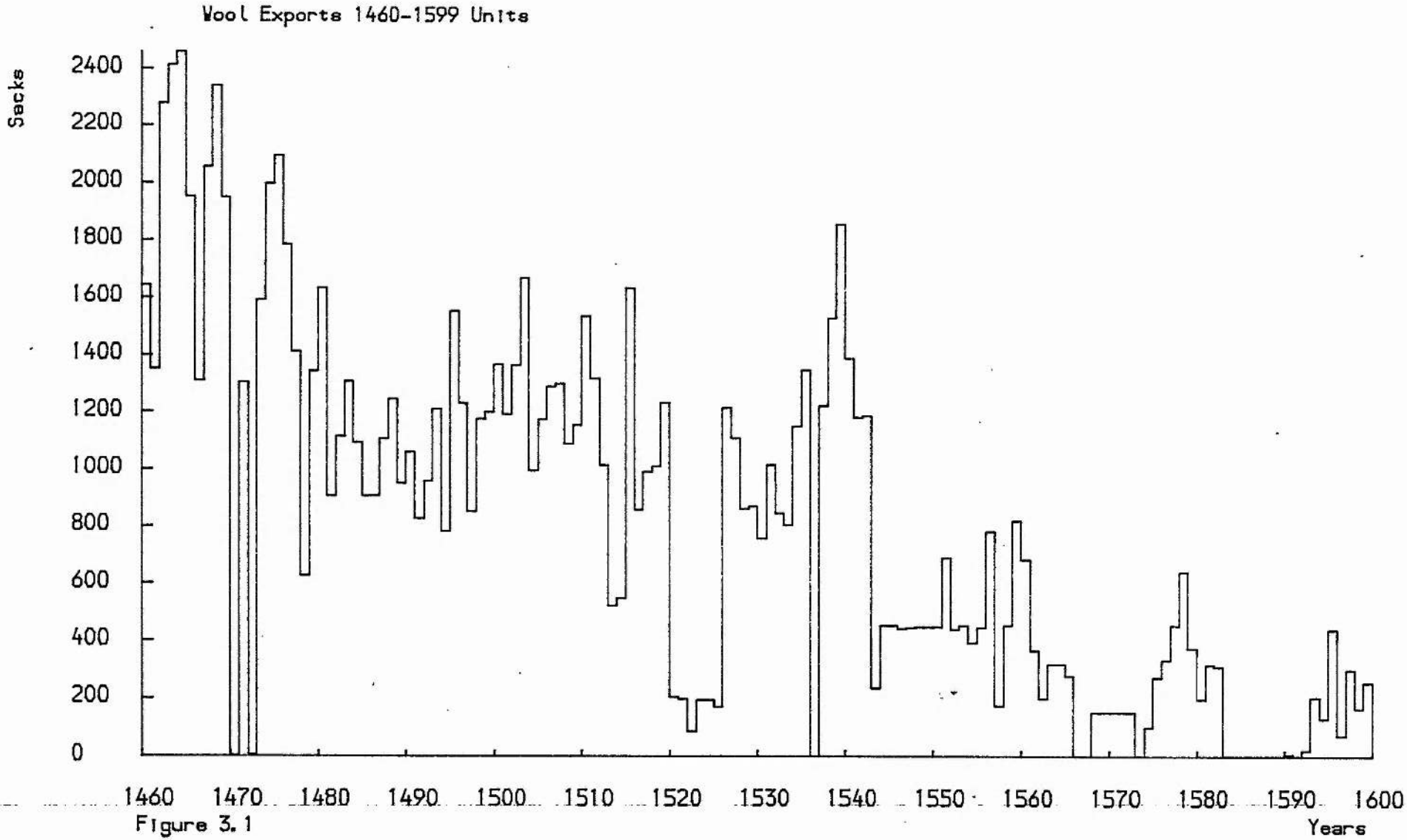
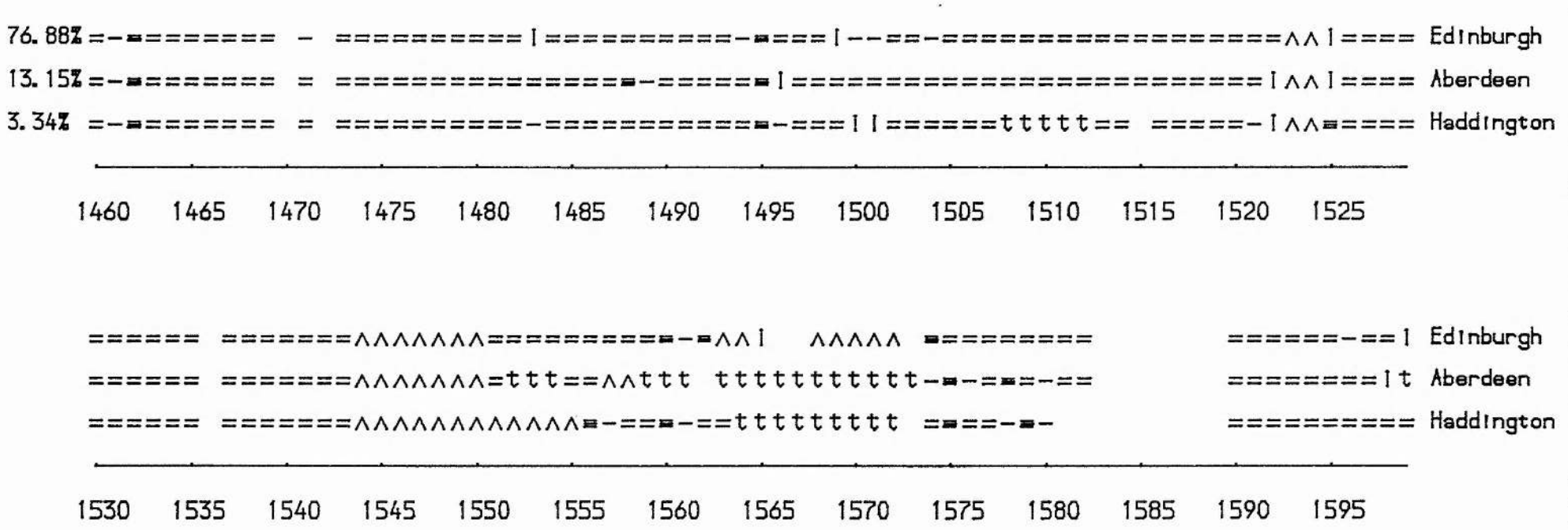

Wool Exports 1460-1599 Units
Sacks
2400
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
1600
Years

Figure 3.1

Figure 3.1.a Classification chart : Top Exporting Burghs of Wool



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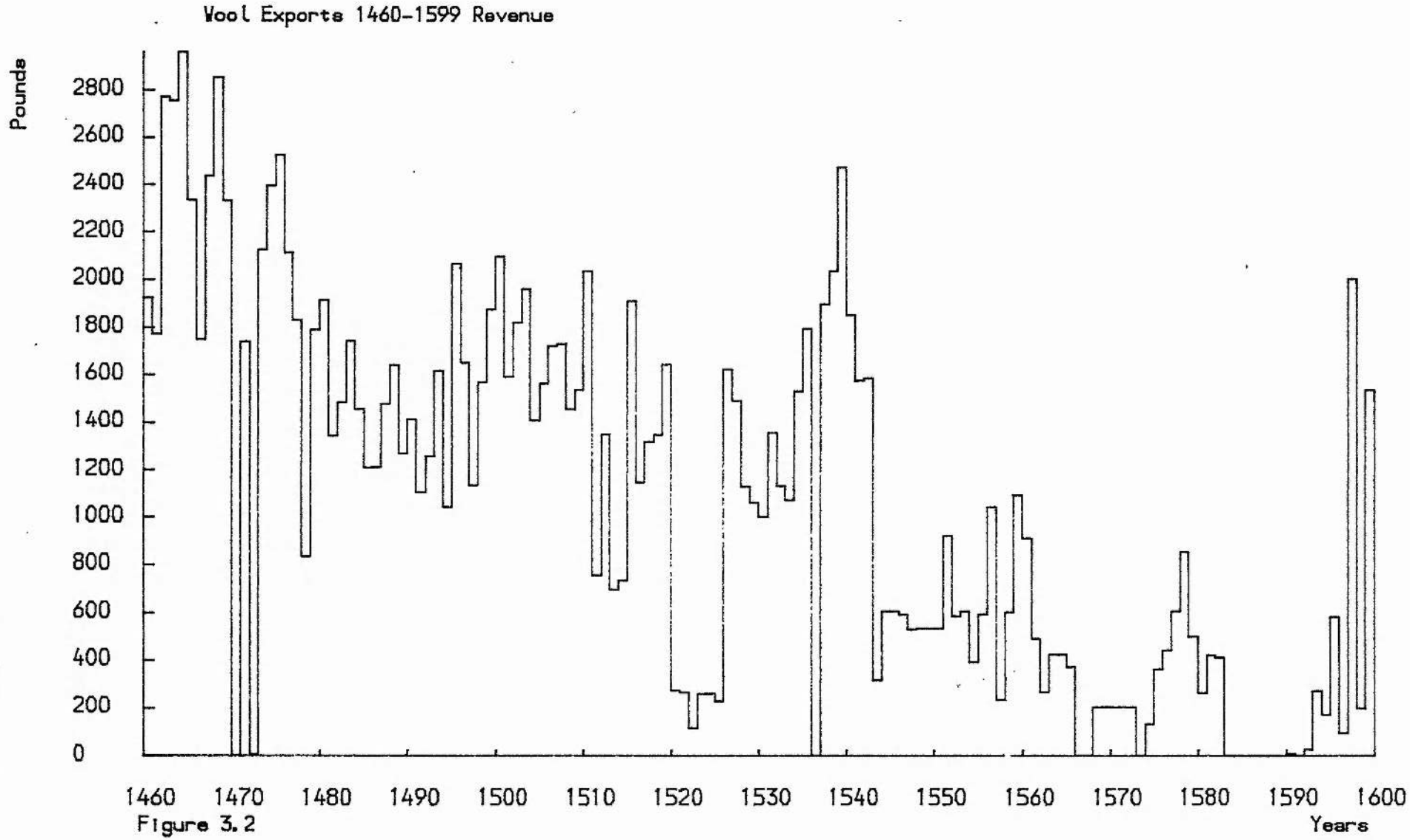
^^ : averaged series t : tack accounts I : irregular accounts


Wool Exports 1460-1599 Revenue
Pounds
2800
2600
2400
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
1600
Years
Figure 3.2

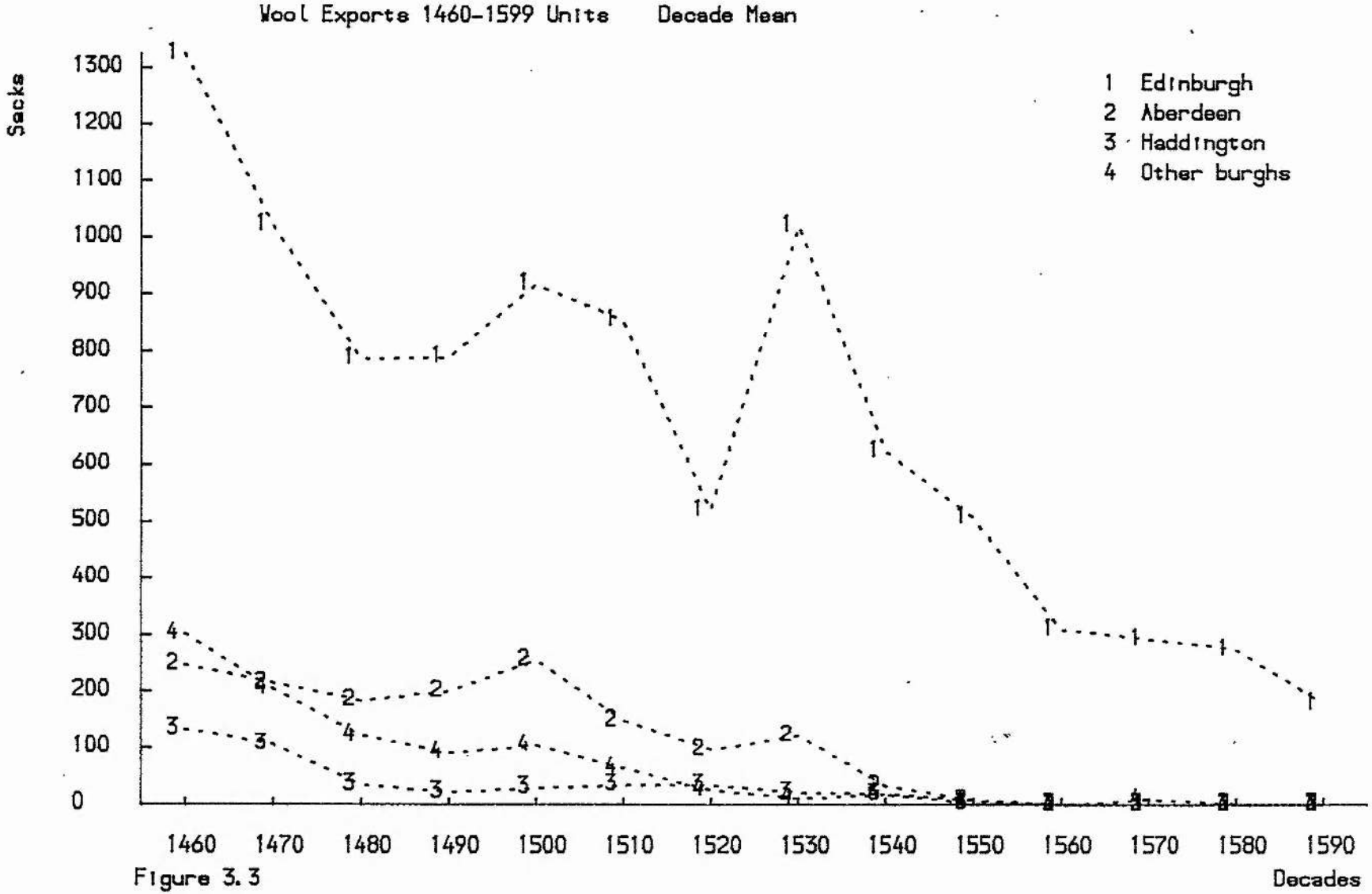

Wool Exports 1460-1599 Units Decade Mean
Sacks
1300
1200
1100
1000
900
800
700
600
500
400
300
200
100
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
Decades
1 Edinburgh
2 Aberdeen
3 Haddington
4 Other burghs

Figure 3.3

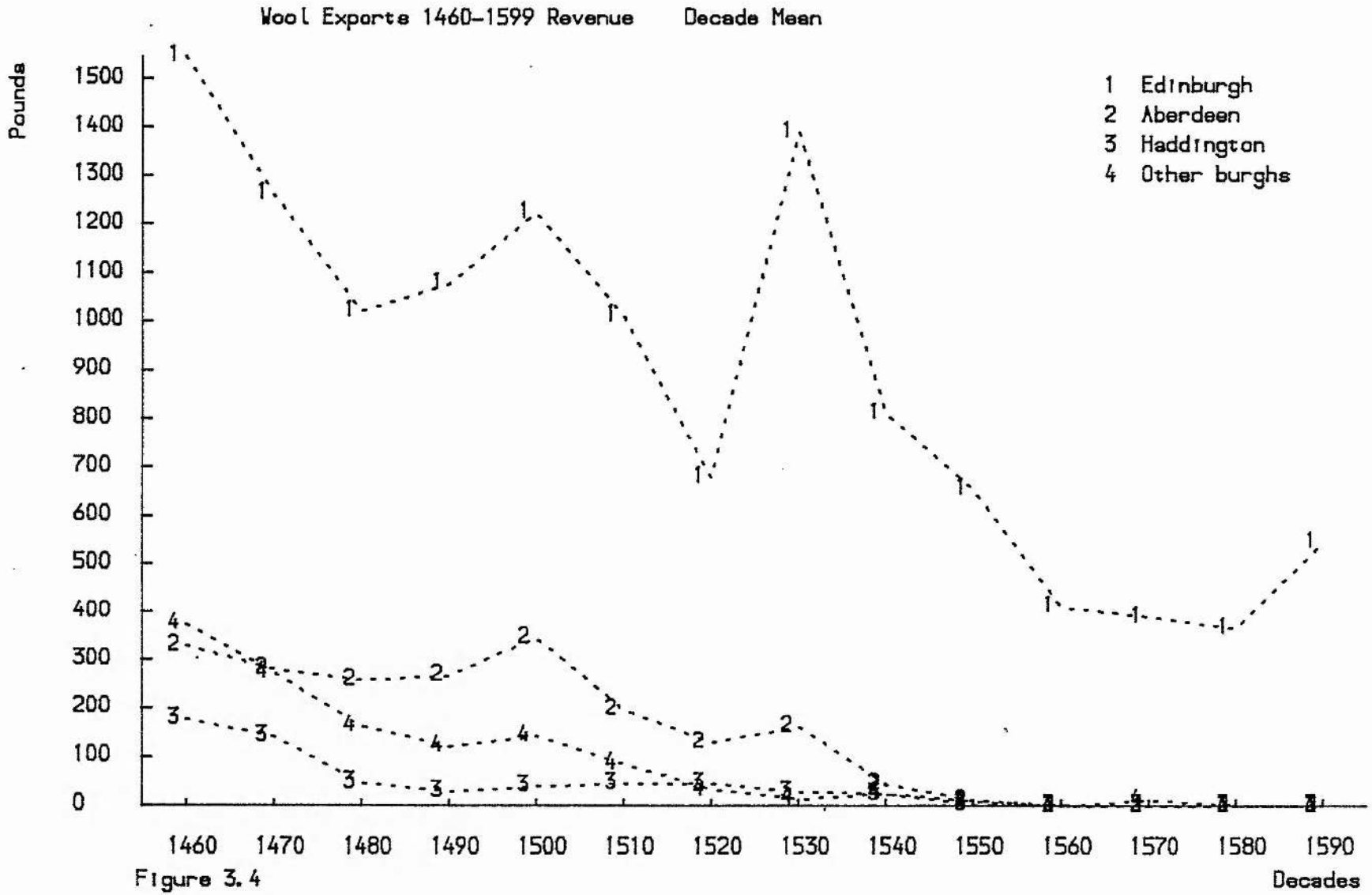

Wool Exports 1460-1599 Revenue Decade Mean
Pounds
1500
1400
1300
1200
1100
1000
900
800
700
600
500
400
300
200
100
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
Decades
1 Edinburgh
2 Aberdeen
3 Haddington
4 Other burghs

Figure 3.4

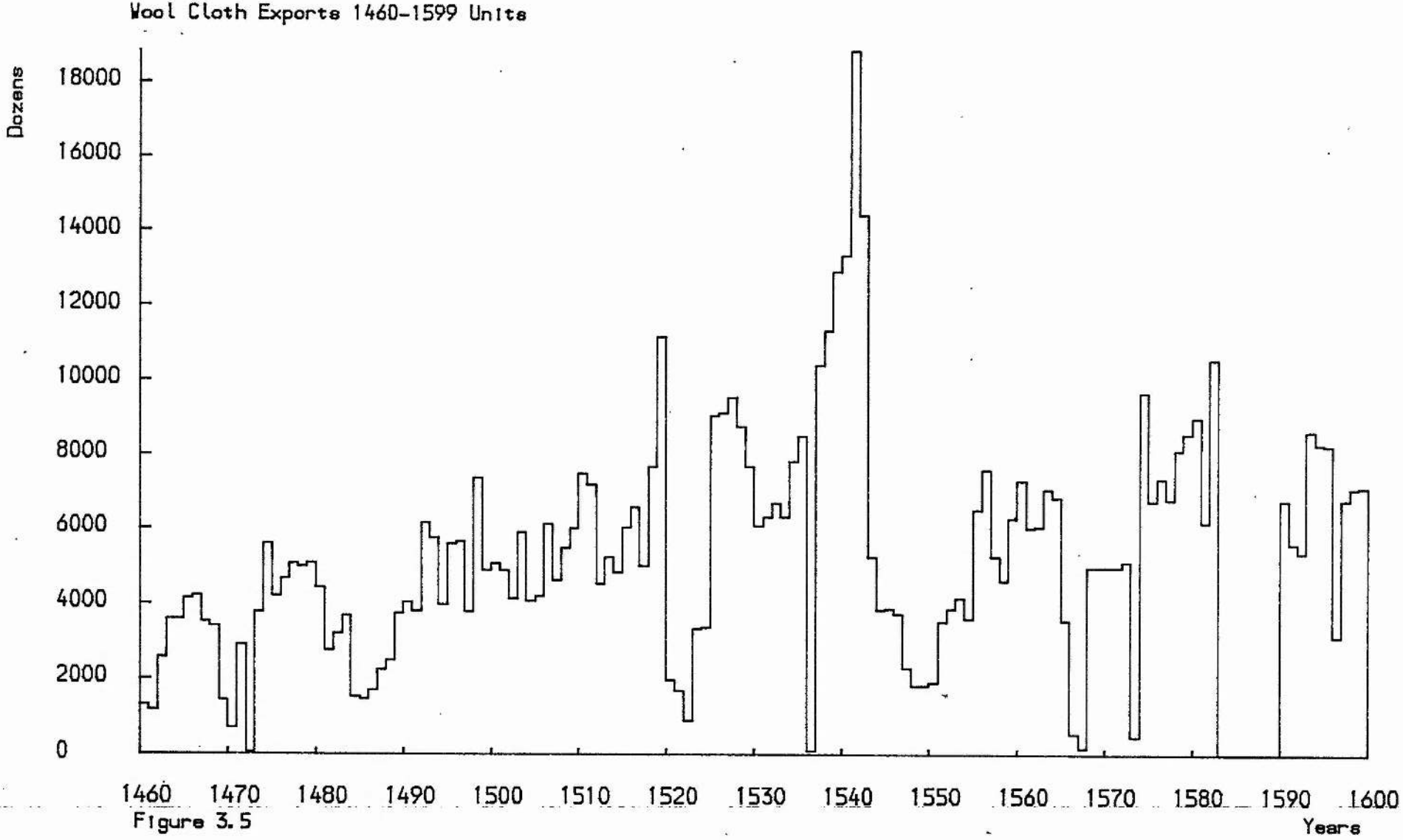
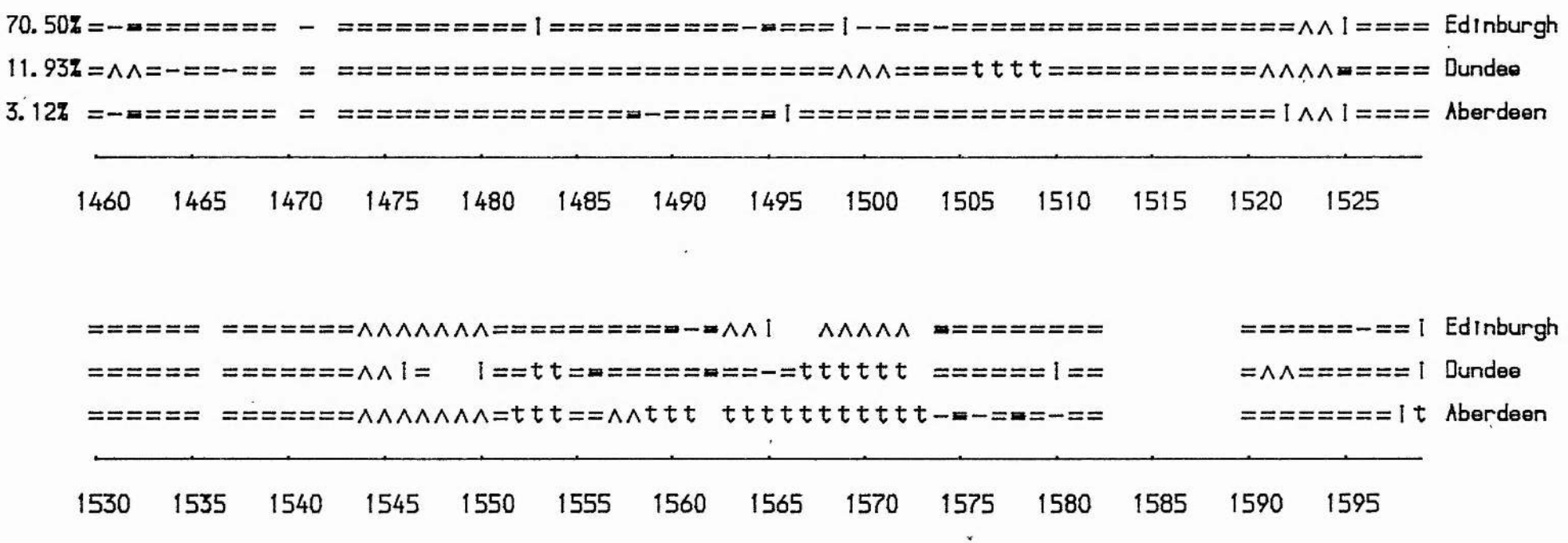

Wool Cloth Exports 1460-1599 Units
Dozens
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
1600
Years

Figure 3.5

Figure 3.5.a Classification chart : Top Exporting Burghs of Wool Cloth



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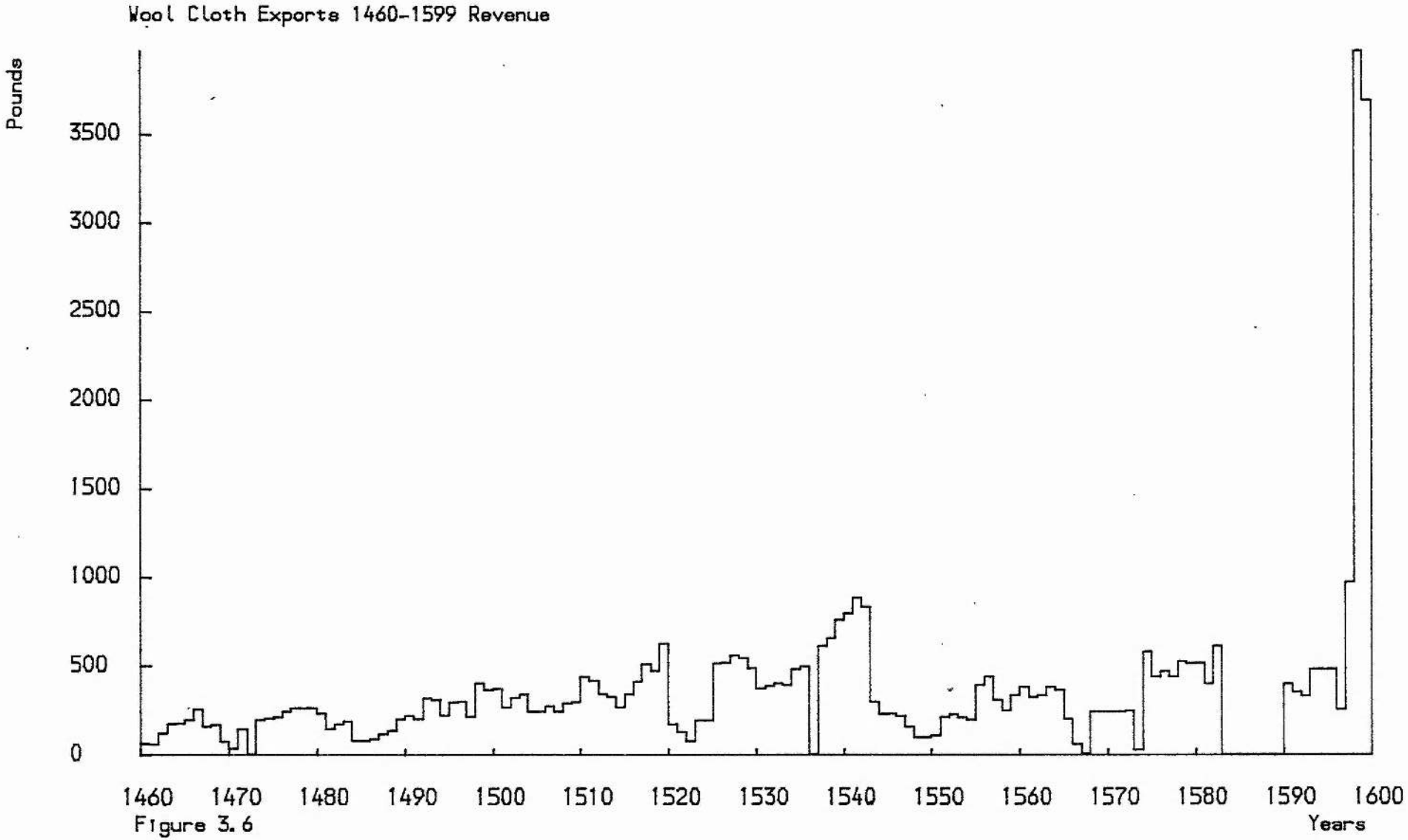
^^ : averaged series t : tack accounts I : irregular accounts


Wool Cloth Exports 1460-1599 Revenue
Pounds
3500
3000
2500
2000
1500
1000
500
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
1600
Years
Figure 3.6

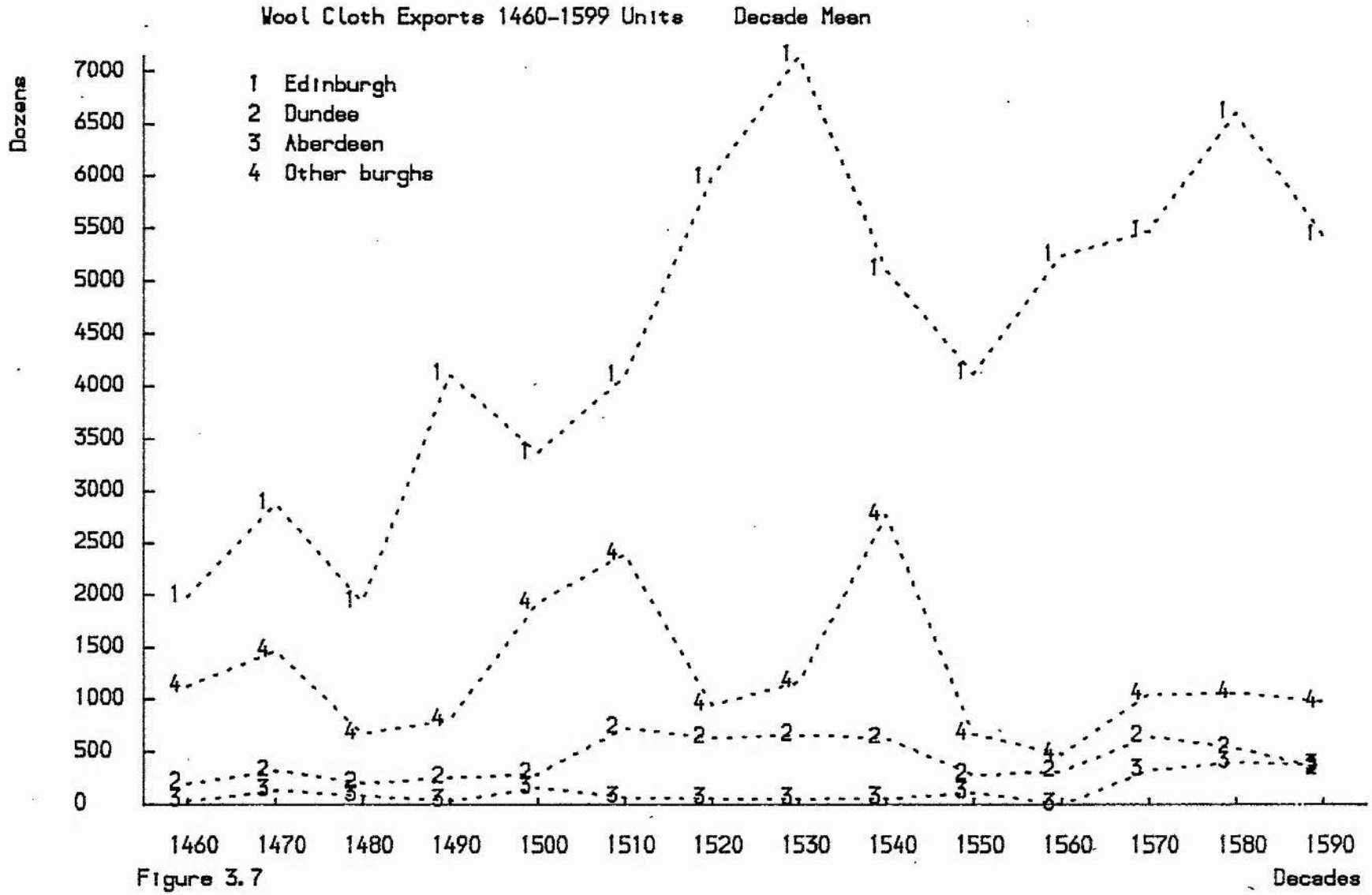

Wool Cloth Exports 1460-1599 Units
Decade Mean
1 Edinburgh
2 Dundee
3 Aberdeen
4 Other burghs
Dozens
7000
6500
6000
5500
5000
4500
4000
3500
3000
2500
2000
1500
1000
500
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
Decades

Figure 3.7

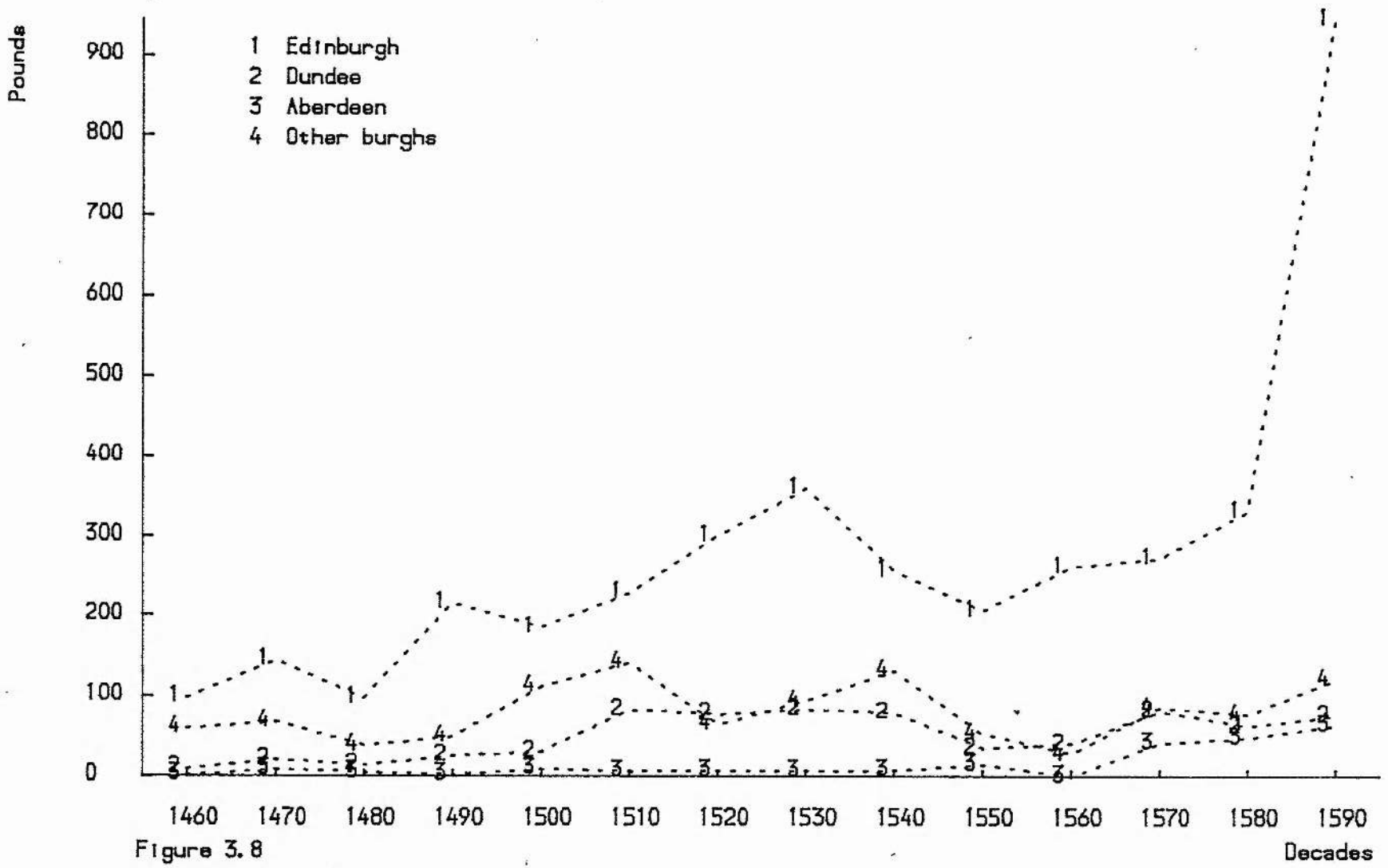

Wool Cloth Exports 1460-1599 Revenue Decade Mean
Pounds
1 Edinburgh
2 Dundee
3 Aberdeen
4 Other burghs
900
800
700
600
500
400
300
200
100
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
Decades

Figure 3.8

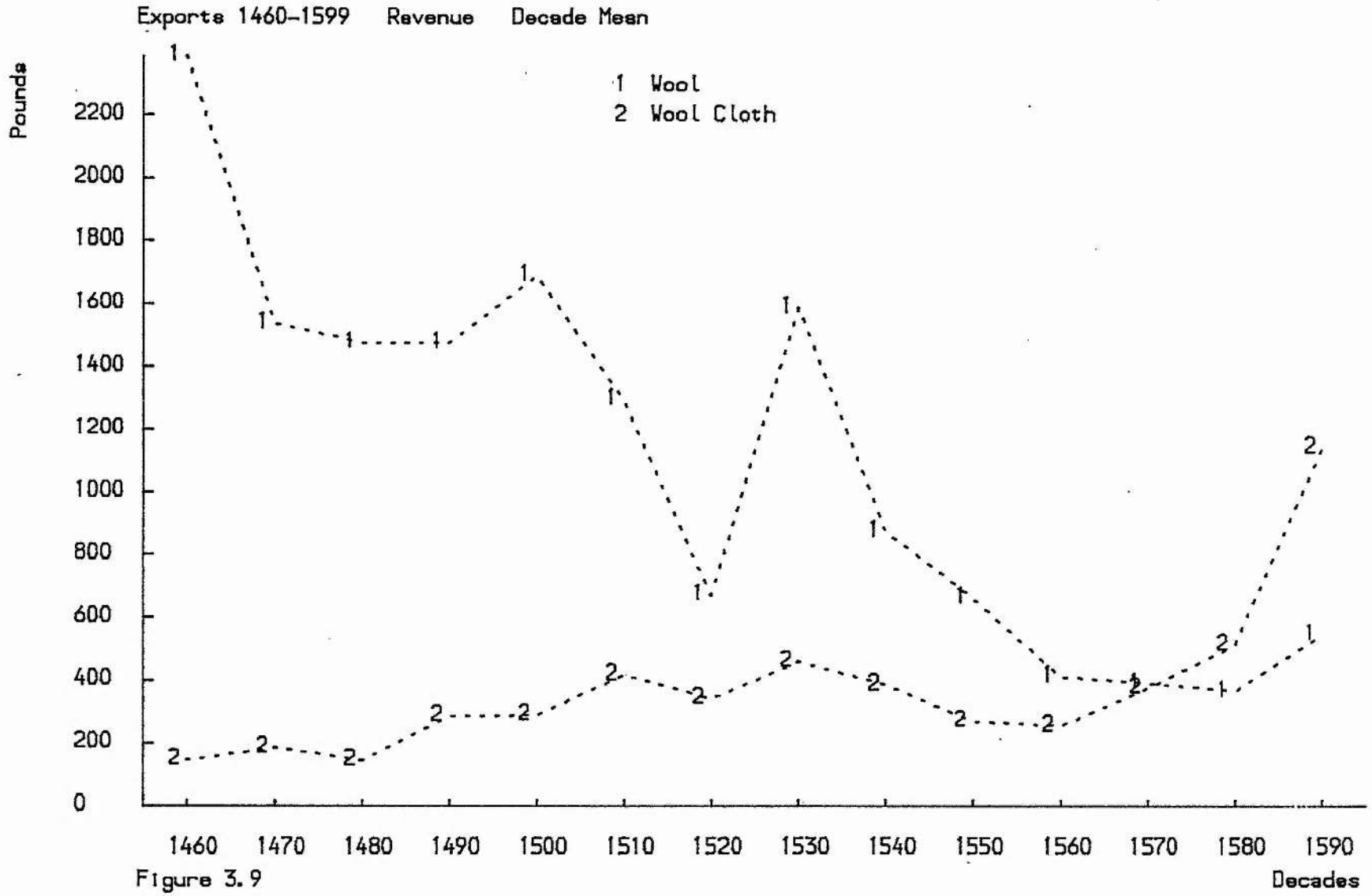

Exports 1460–1599 Revenue Decade Mean
Pounds
1 Wool
2 Wool Cloth
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
Decades

Figure 3.9

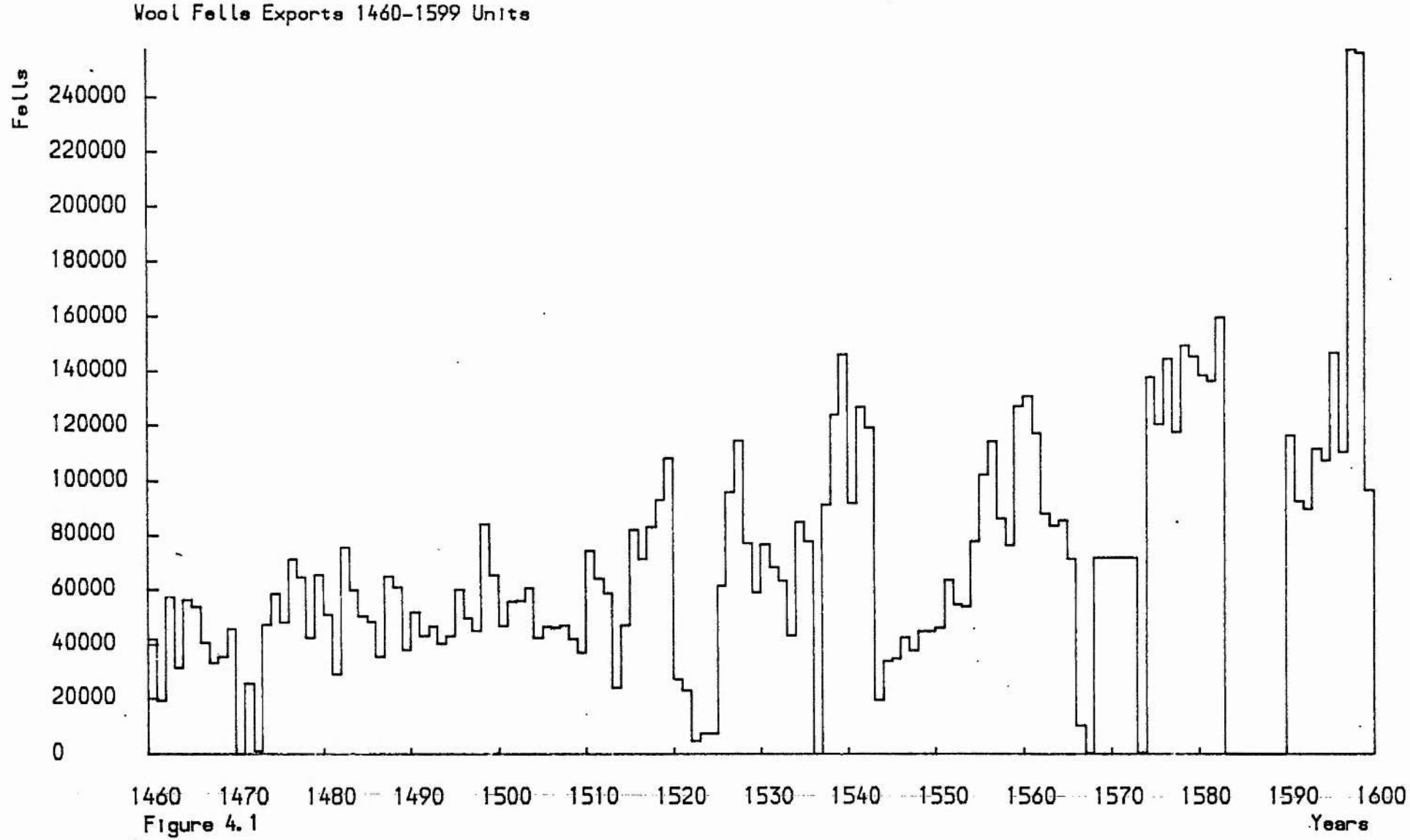
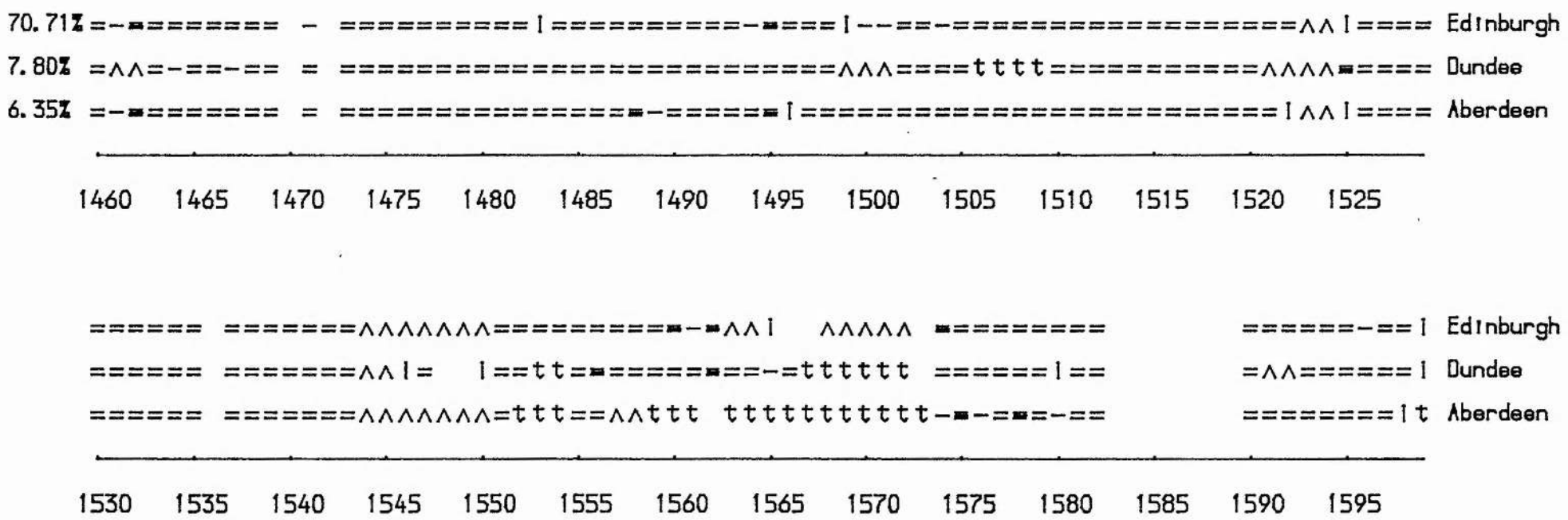

Wool Fells Exports 1460-1599 Units
Fells
240000
220000
200000
180000
160000
140000
120000
100000
80000
60000
40000
20000
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
1600
Years

Figure 4.1

Figure 4.1.a Classification chart : Top Exporting Burghs of Wool Fells



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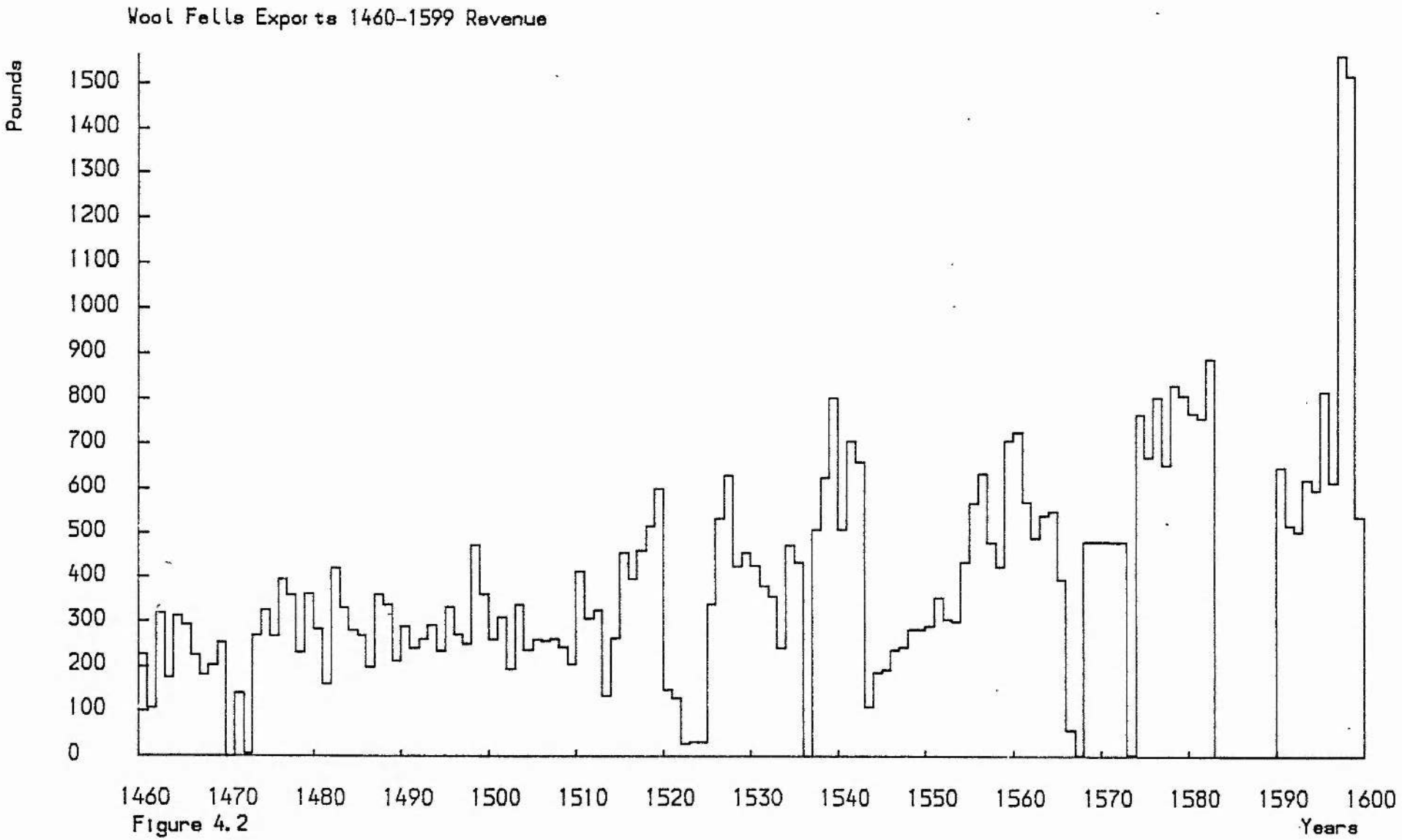

Wool Fells Exports 1460-1599 Revenue
Pounds
1500
1400
1300
1200
1100
1000
900
800
700
600
500
400
300
200
100
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
1600
Years
Figure 4.2

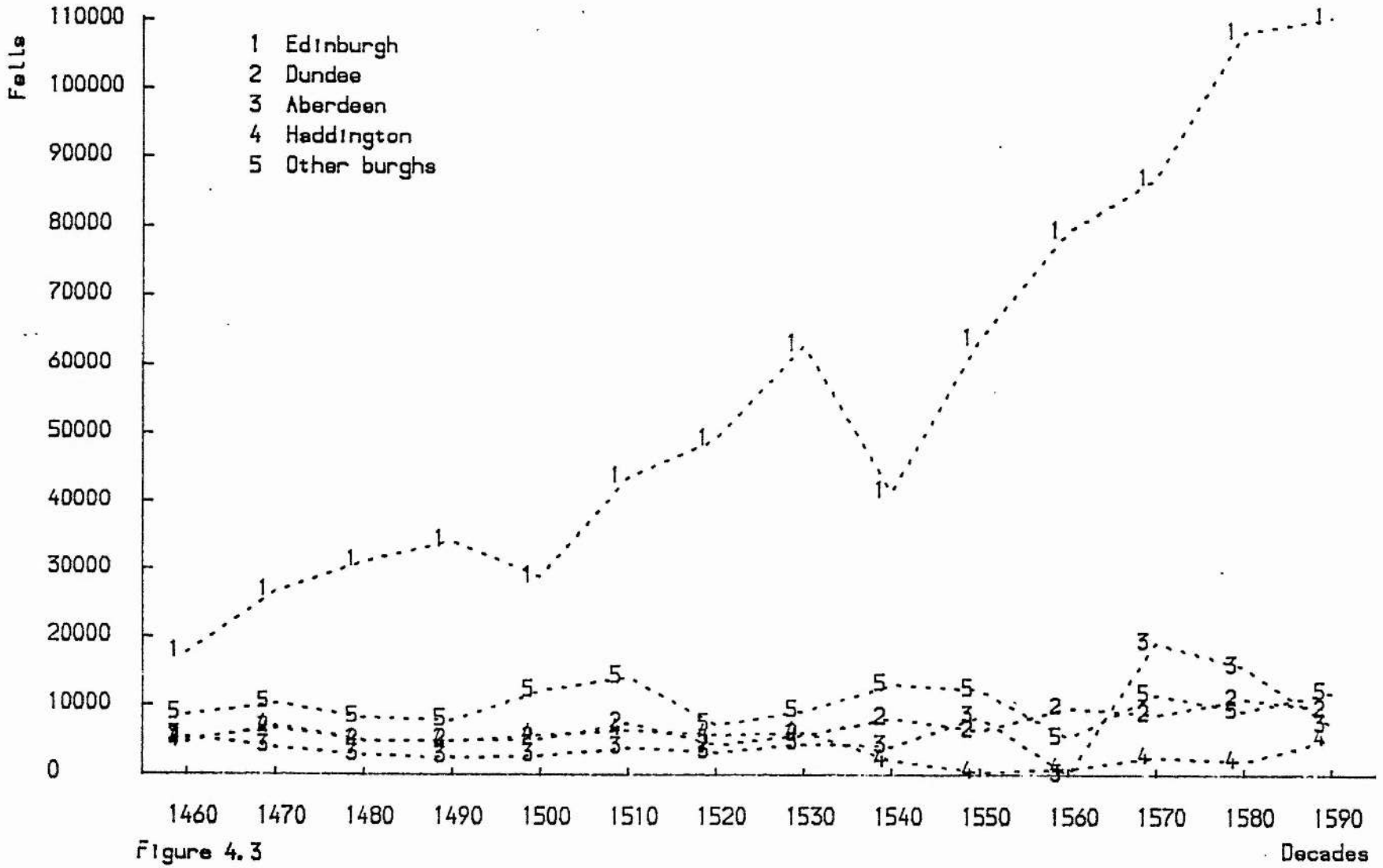

Wool Fells Exports 1460-1599 Units Decade Mean
1 Edinburgh
2 Dundee
3 Aberdeen
4 Haddington
5 Other burghs
Fells
110000
100000
90000
80000
70000
60000
50000
40000
30000
20000
10000
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
Decades

Figure 4.3

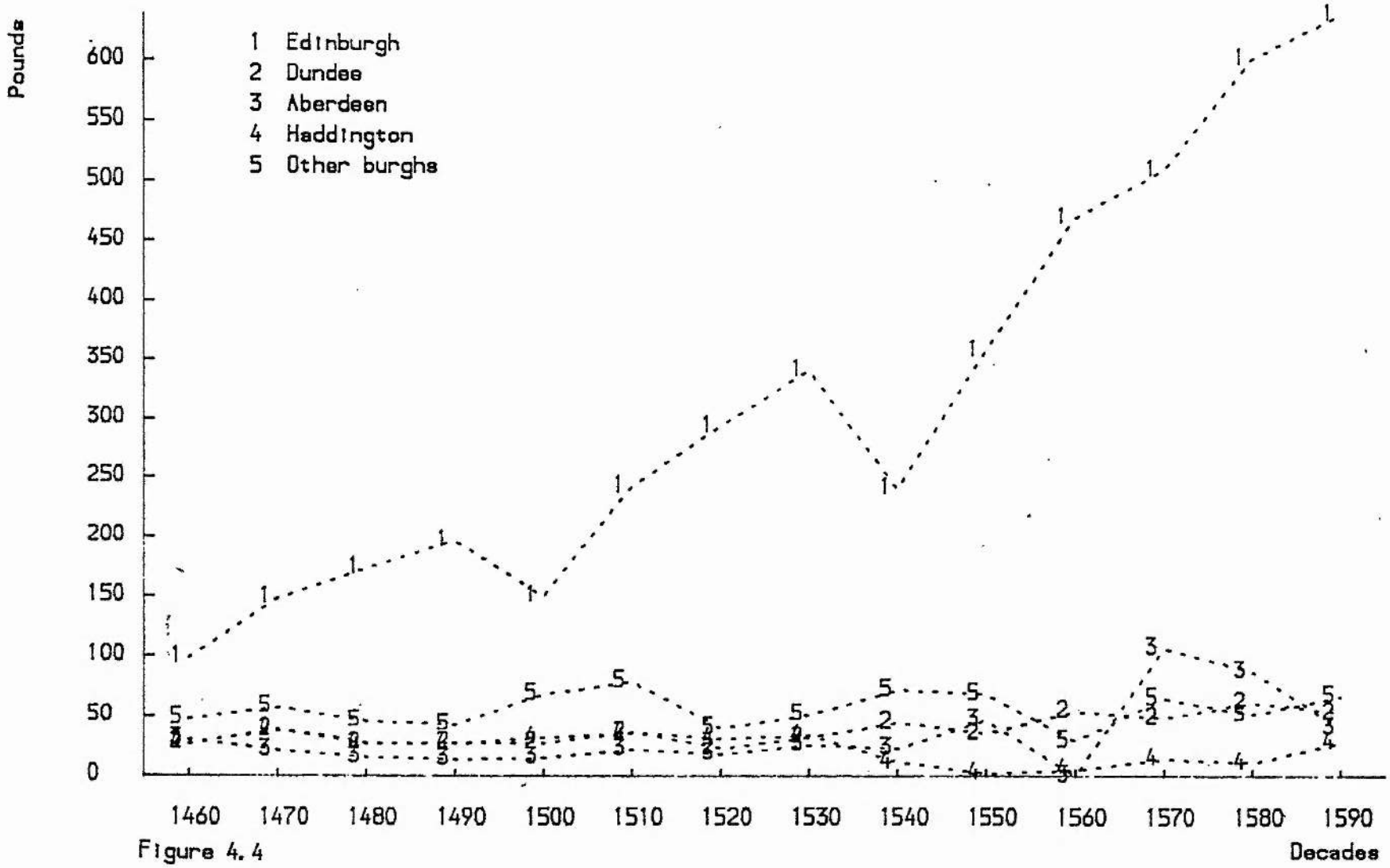

Wool Fells Exports 1460-1599 Revenue Decade Mean
1 Edinburgh
2 Dundee
3 Aberdeen
4 Haddington
5 Other burghs
Pounds
600
550
500
450
400
350
300
250
200
150
100
50
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
Decades

Figure 4.4

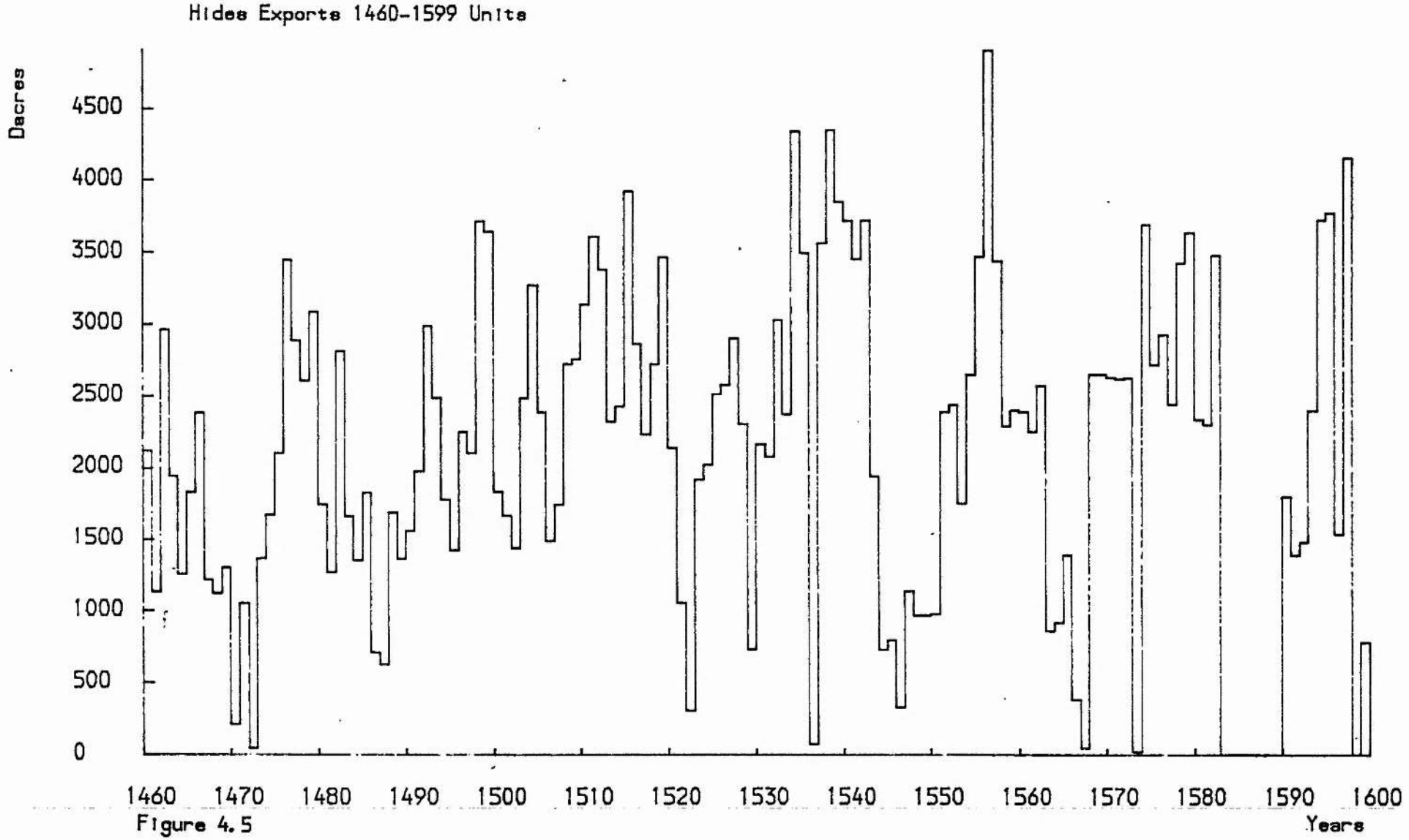
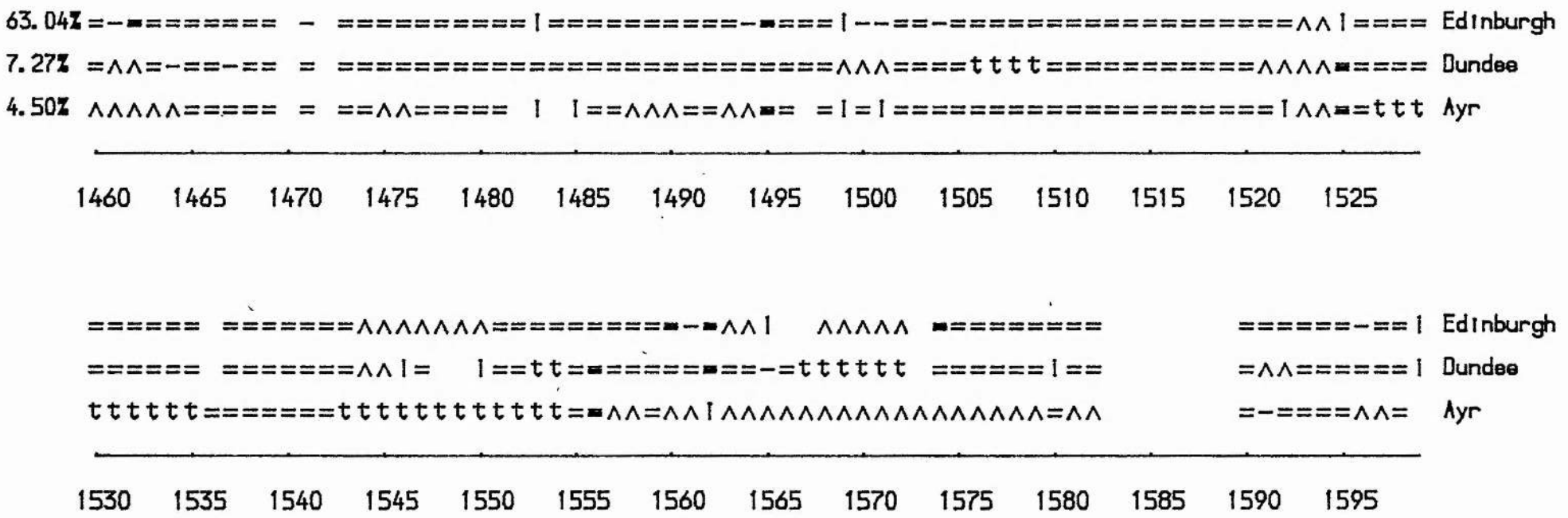

Hides Exports 1460-1599 Units
Dacres
4500
4000
3500
3000
2500
2000
1500
1000
500
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
1600
Years

Figure 4.5

Figure 4.5.a Classification chart : Top Exporting Burghs of Hides



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^^ : averaged series t : tack accounts I : irregular accounts

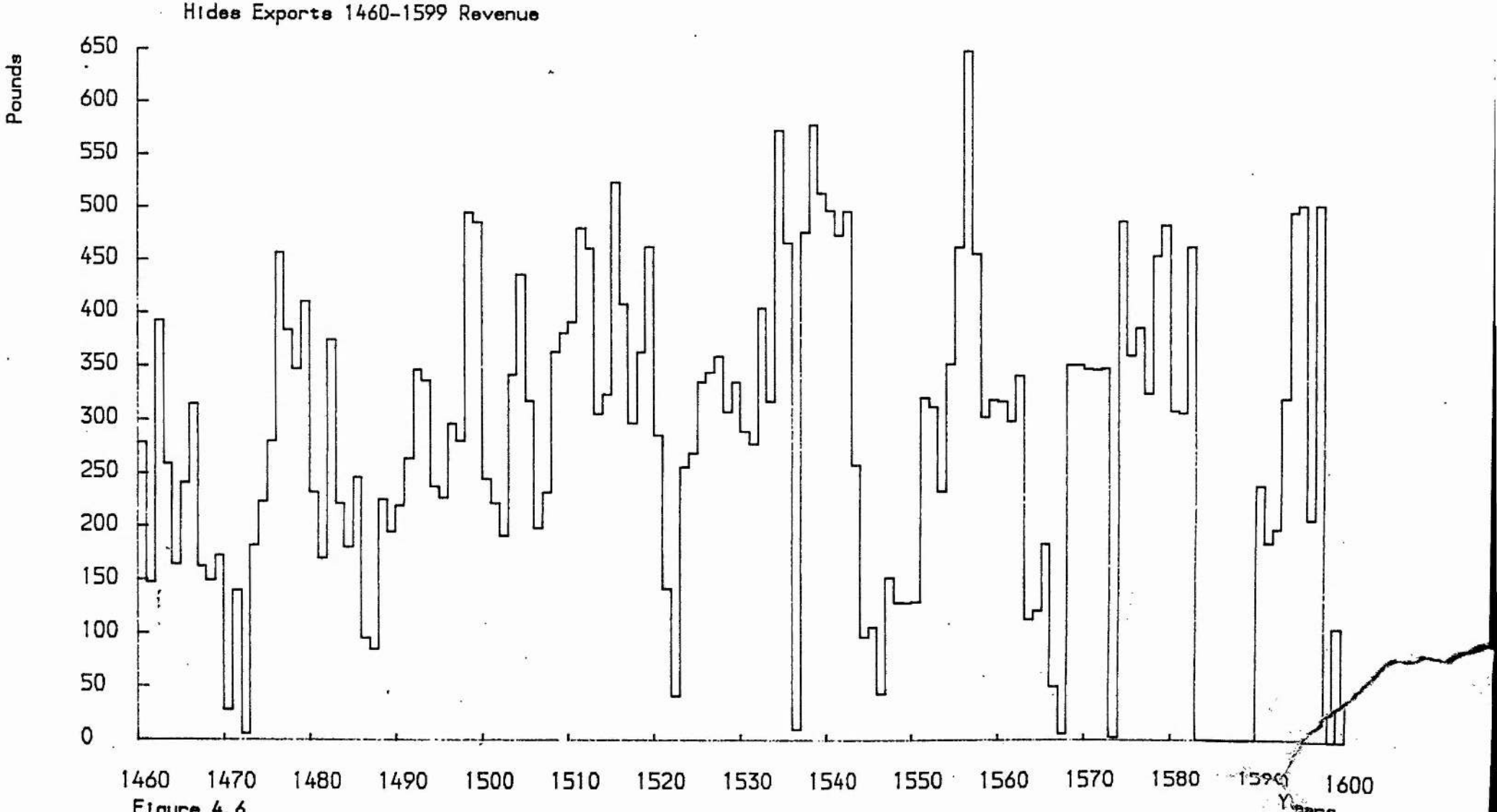

Hides Exports 1460-1599 Revenue
Pounds
650
600
550
500
450
400
350
300
250
200
150
100
50
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
1600
Years

Figure 4.6

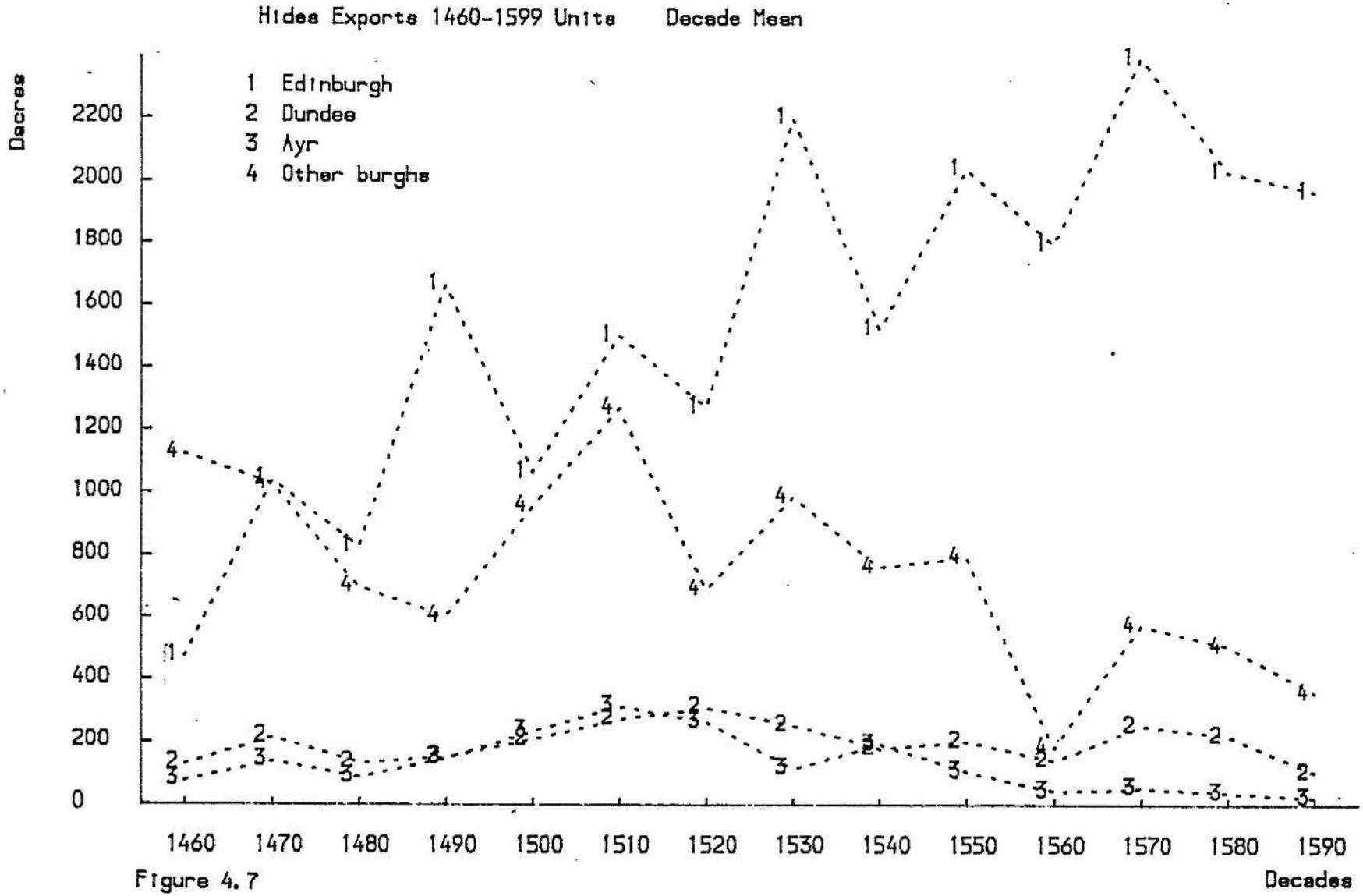

Hides Exports 1460-1599 Units Decade Mean
1 Edinburgh
2 Dundee
3 Ayr
4 Other burghs
Decres
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
Decades

Figure 4.7

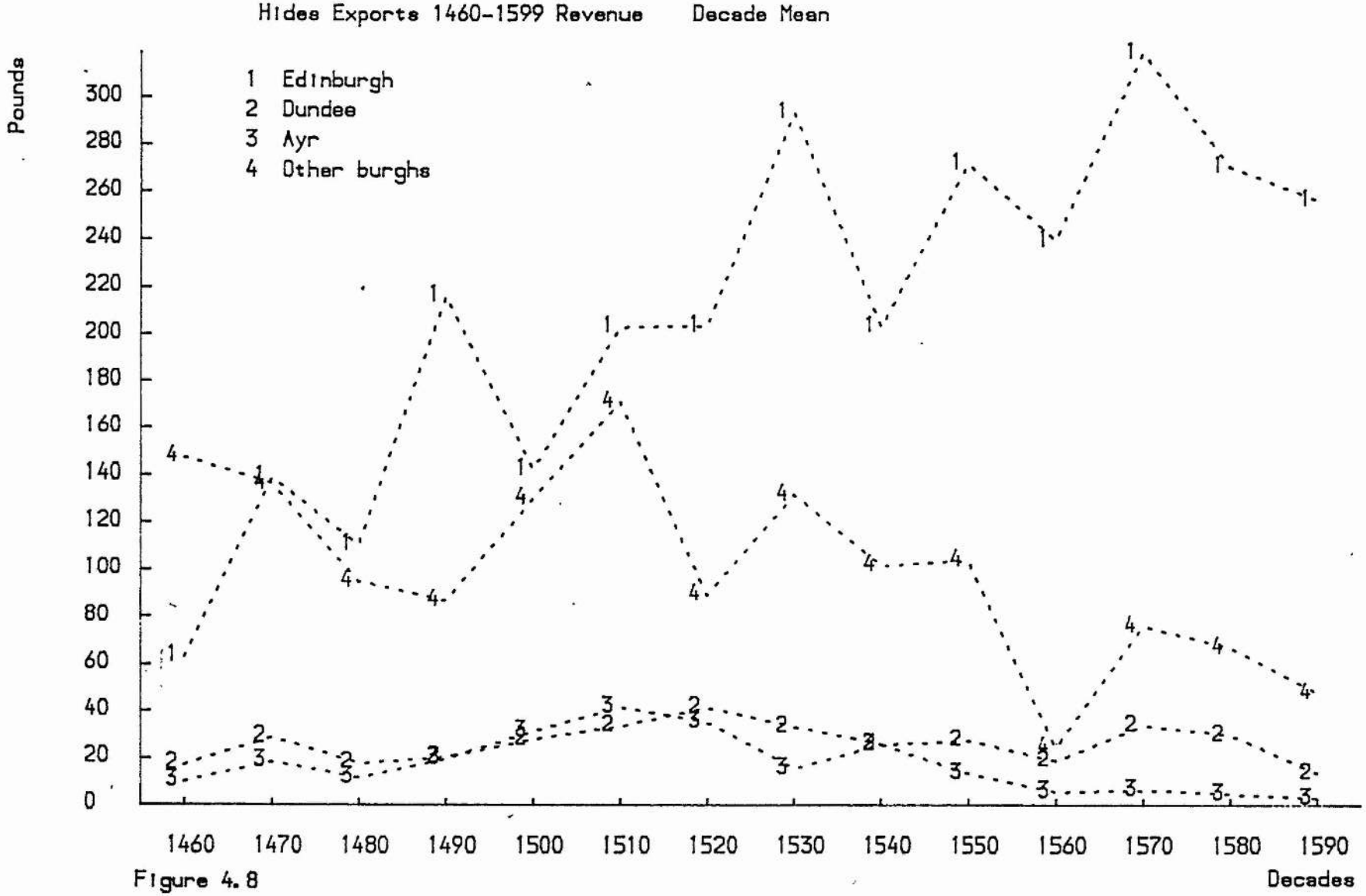

Hides Exports 1460-1599 Revenue Decade Mean
1 Edinburgh
2 Dundee
3 Ayr
4 Other burghs
Pounds
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
Decades

Figure 4.8

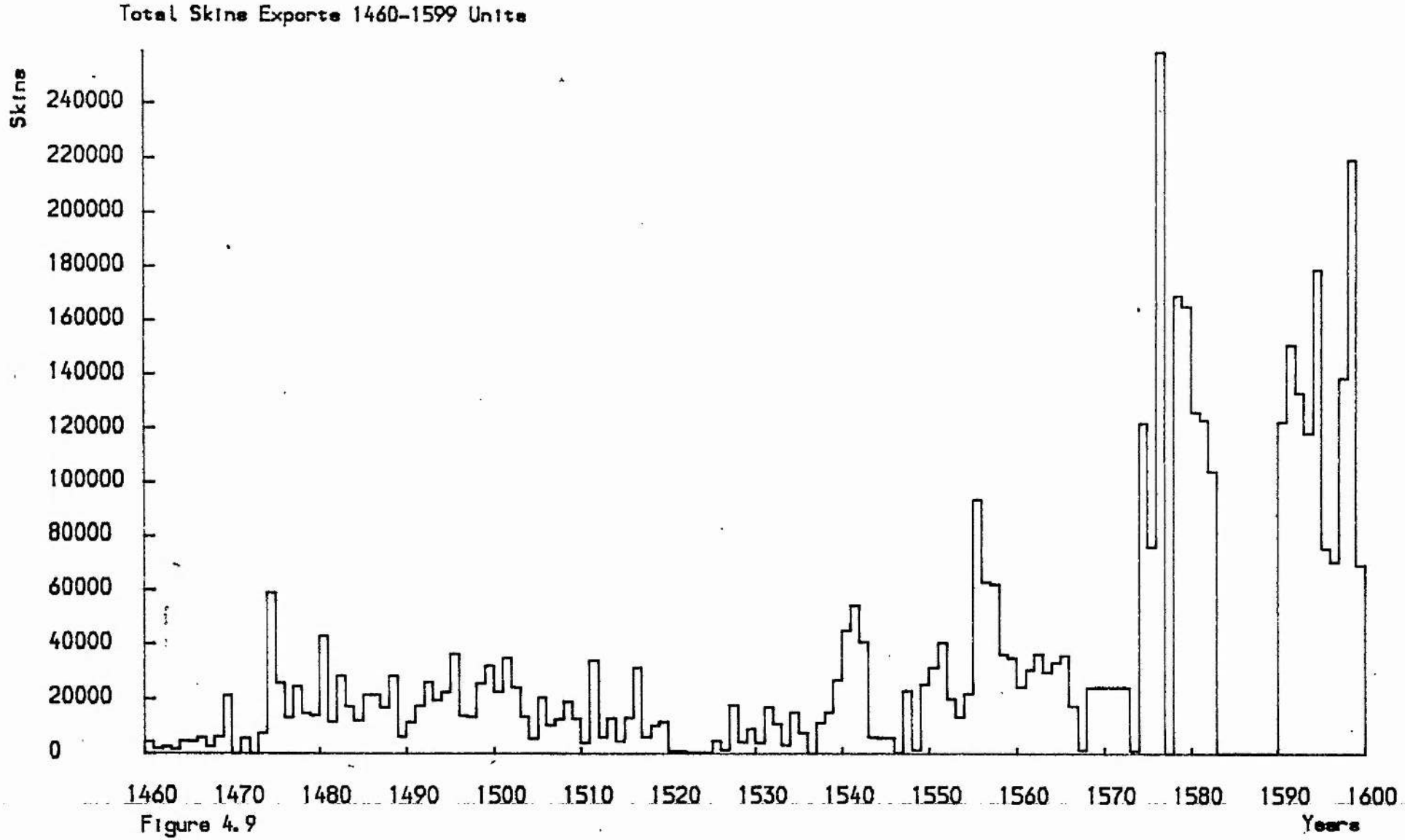
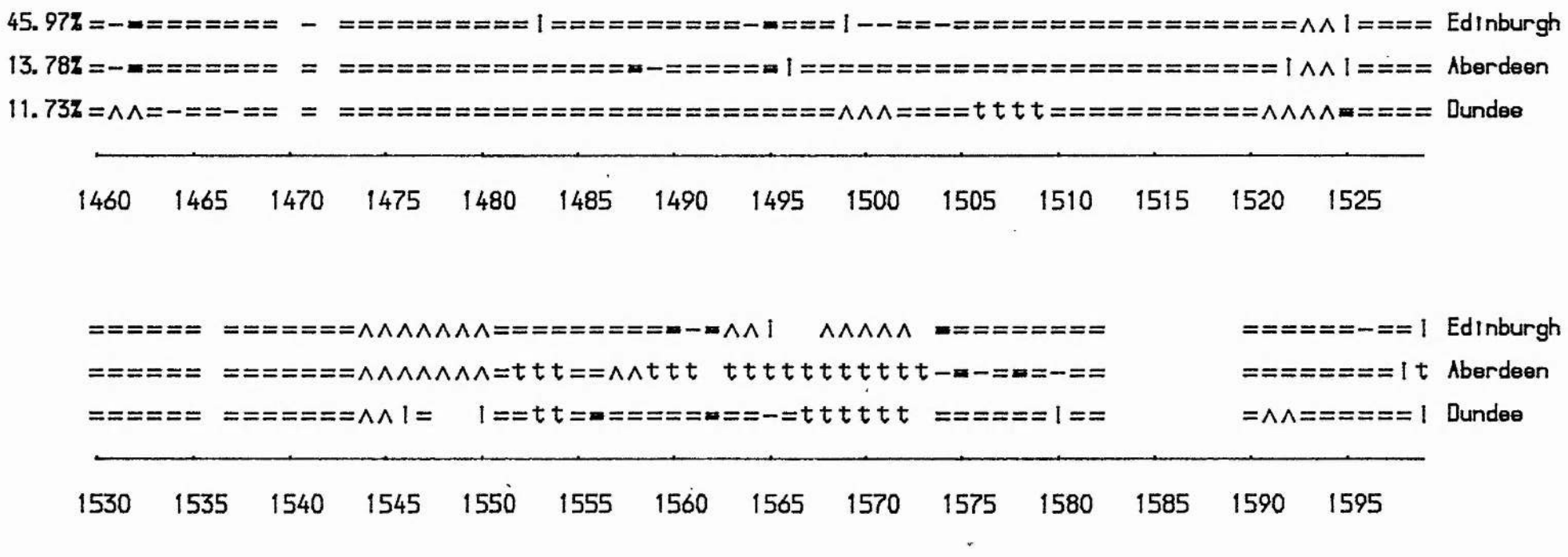

Total Skins Exports 1460-1599 Units
Skins
240000
220000
200000
180000
160000
140000
120000
100000
80000
60000
40000
20000
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
1600
Years

Figure 4.9

Figure 4.9.a Classification chart : Top Exporting Burghs of Total Skins



<blank> : missing accounts - : short accounts = : regular accounts ■ : long accounts
^^ : averaged series t : tack accounts I : irregular accounts

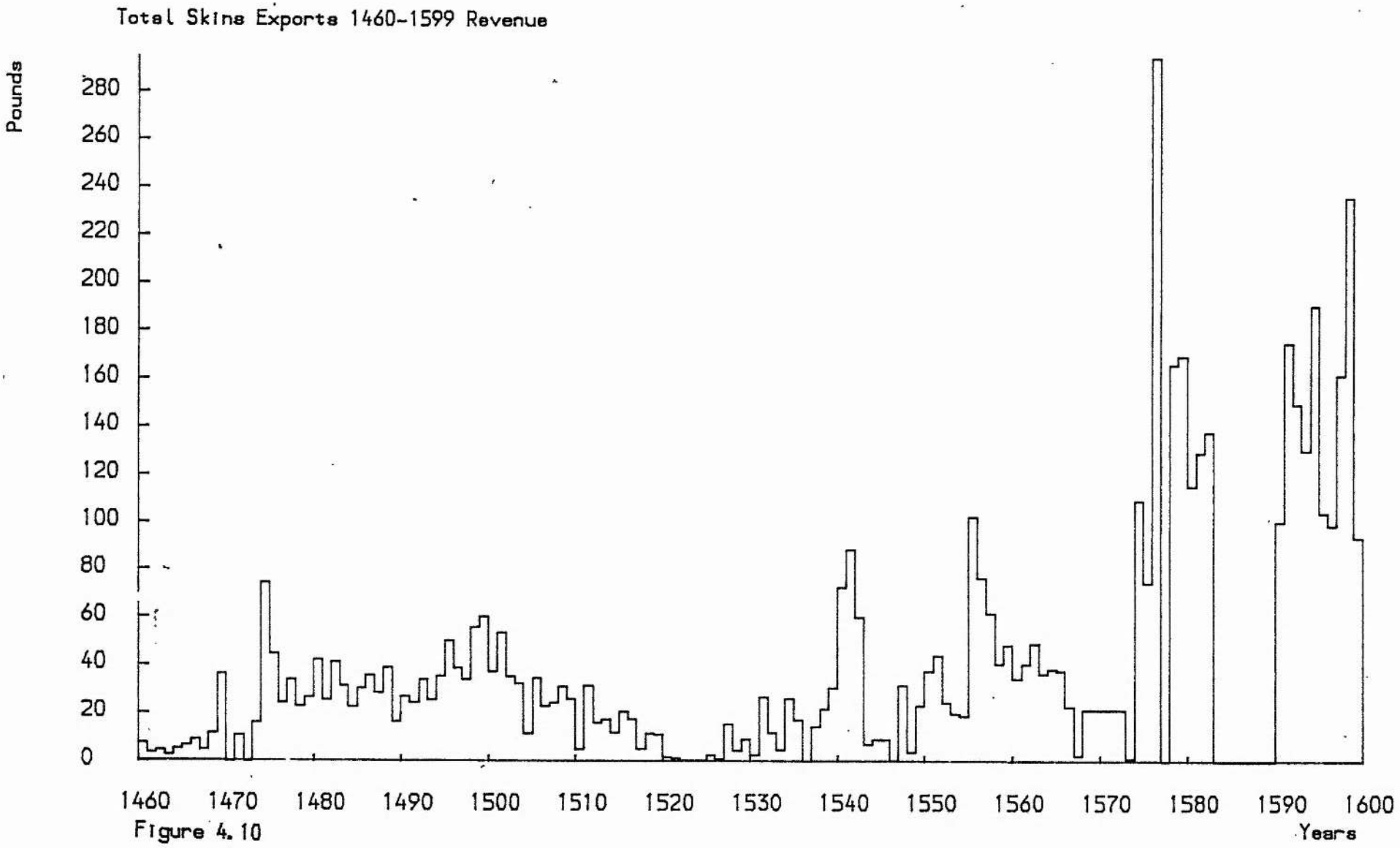

Total Skins Exports 1460-1599 Revenue
Pounds
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
1600
Years

Figure 4.10

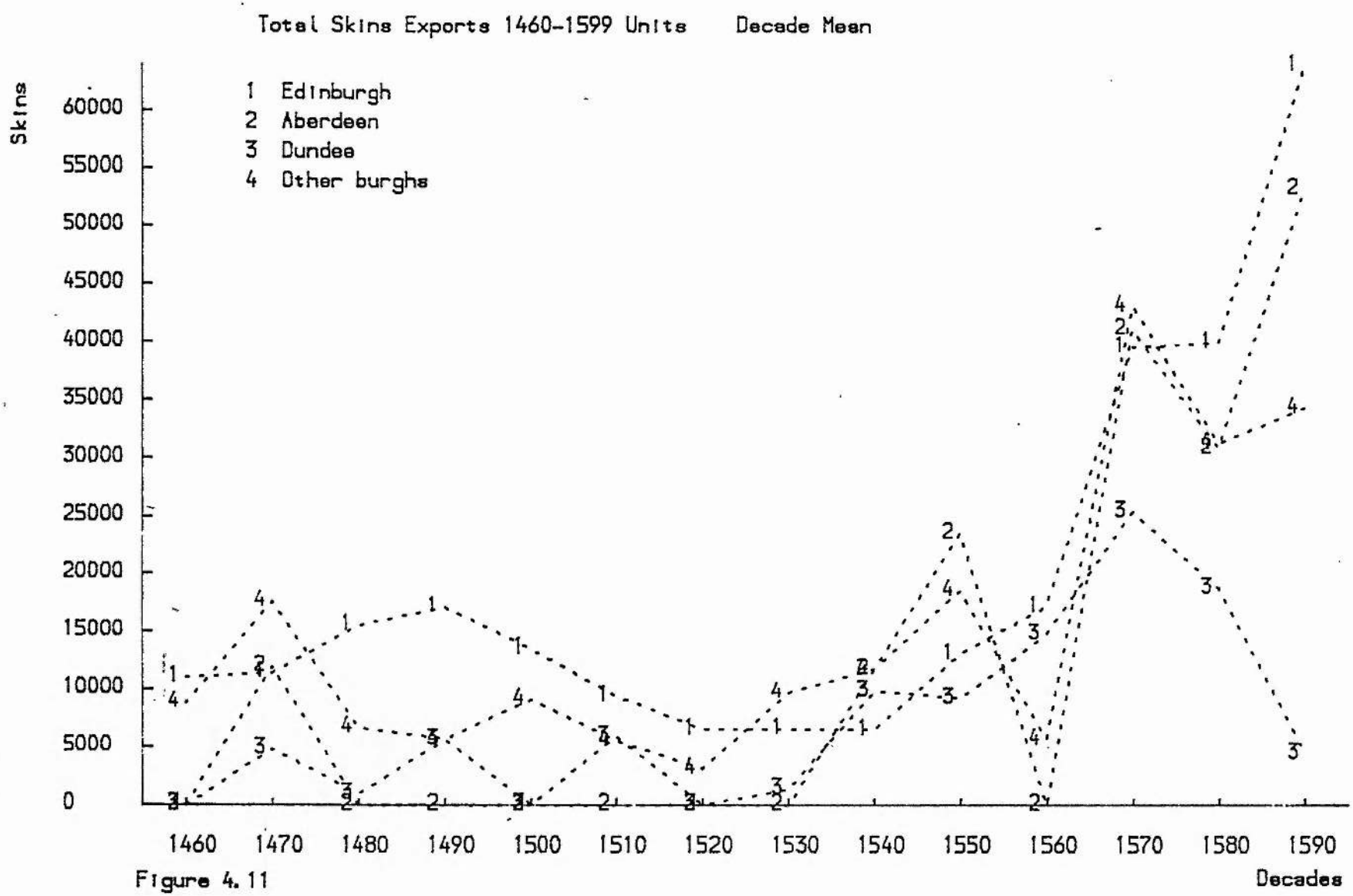

Total Skins Exports 1460-1599 Units Decade Mean
1 Edinburgh
2 Aberdeen
3 Dundee
4 Other burghs
Skins
60000
55000
50000
45000
40000
35000
30000
25000
20000
15000
10000
5000
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
Decades

Figure 4.11

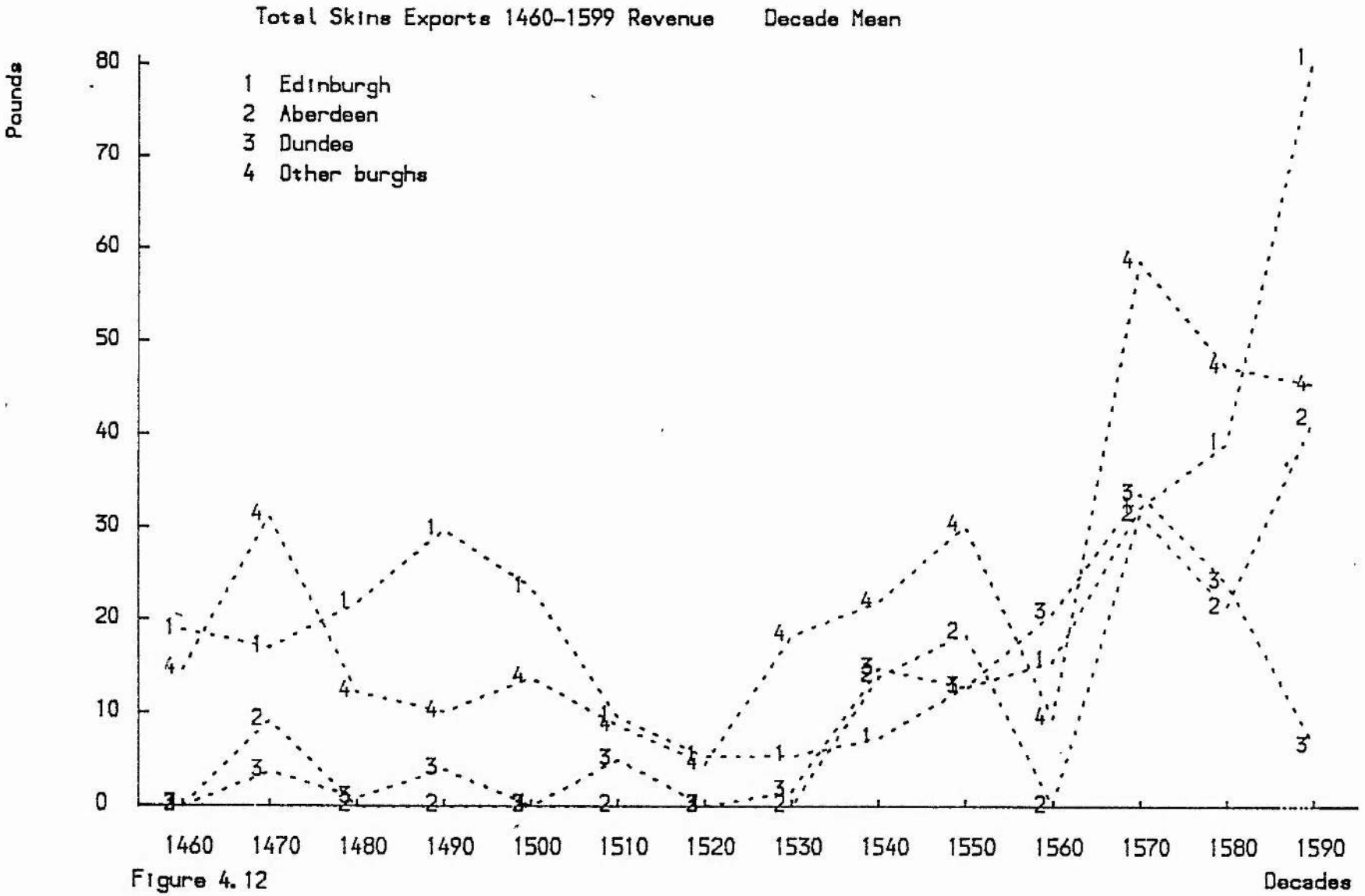

Total Skins Exports 1460-1599 Revenue Decade Mean
Pounds
1 Edinburgh
2 Aberdeen
3 Dundee
4 Other burghs
80
70
60
50
40
30
20
10
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
Decades

Figure 4.12

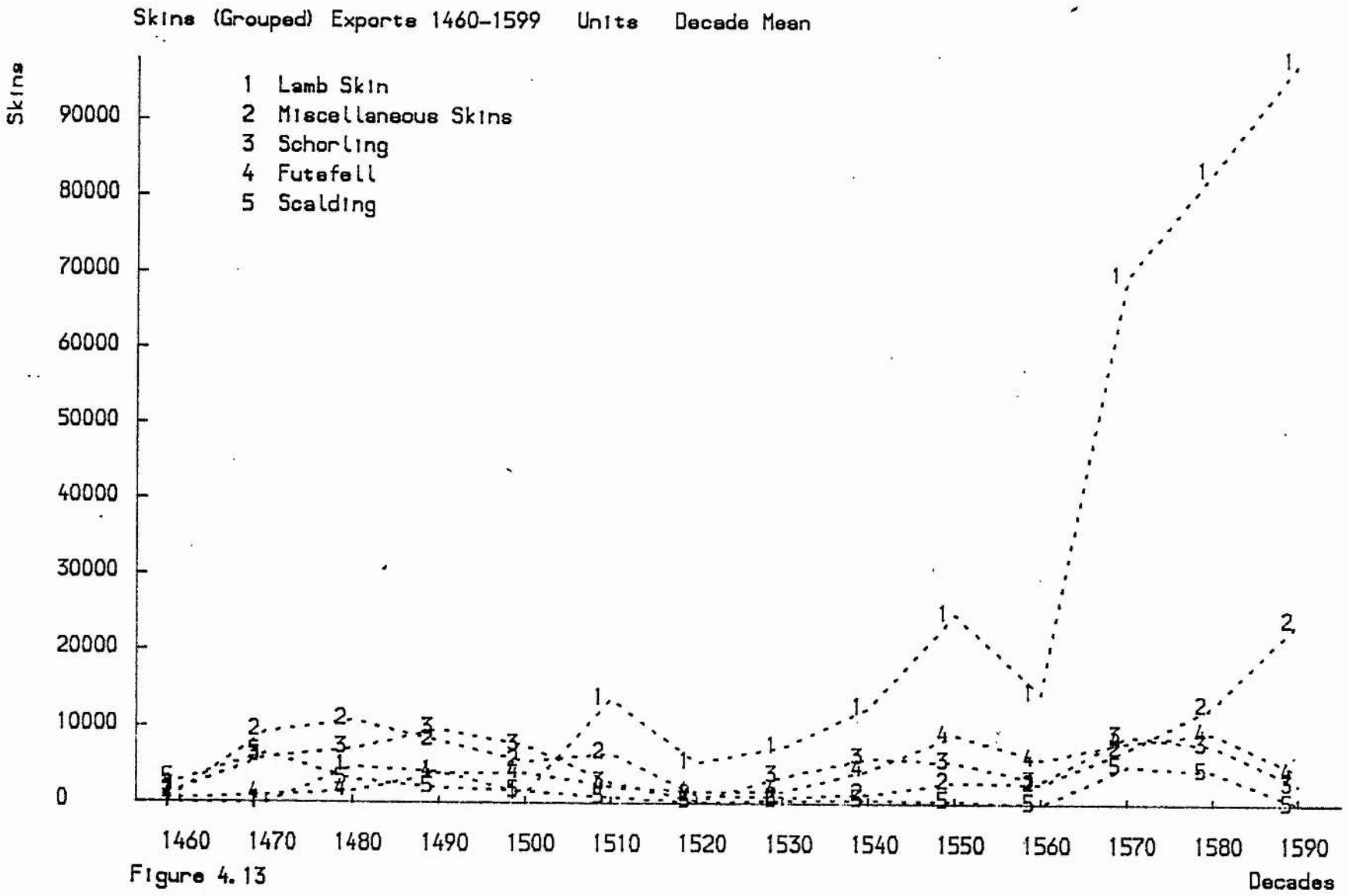

Skins (Grouped) Exports 1460-1599 Units Decade Mean
Skins
1 Lamb Skin
2 Miscellaneous Skins
3 Schorling
4 Futefell
5 Scalding
90000
80000
70000
60000
50000
40000
30000
20000
10000
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
Decades

Figure 4.13

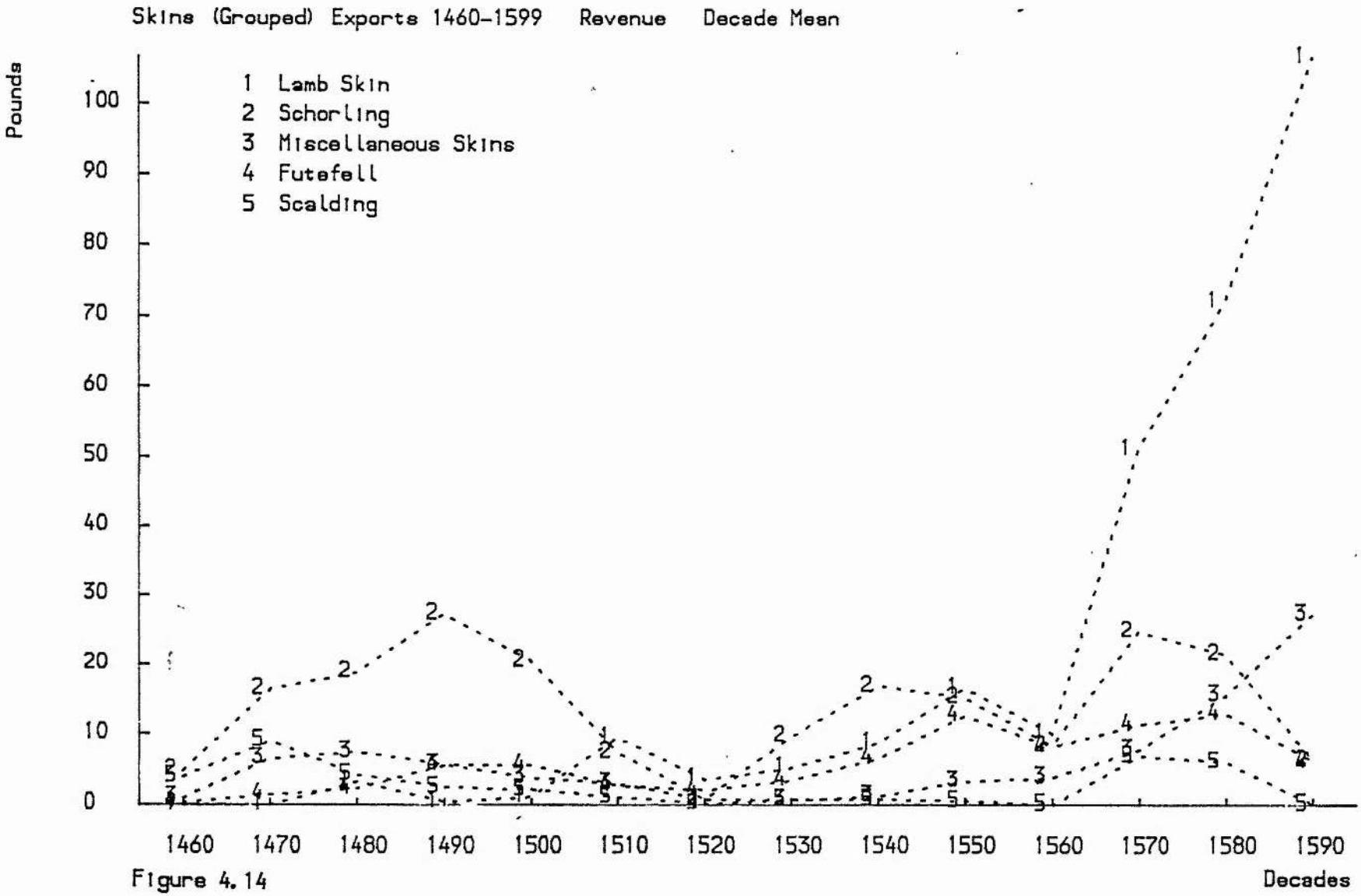
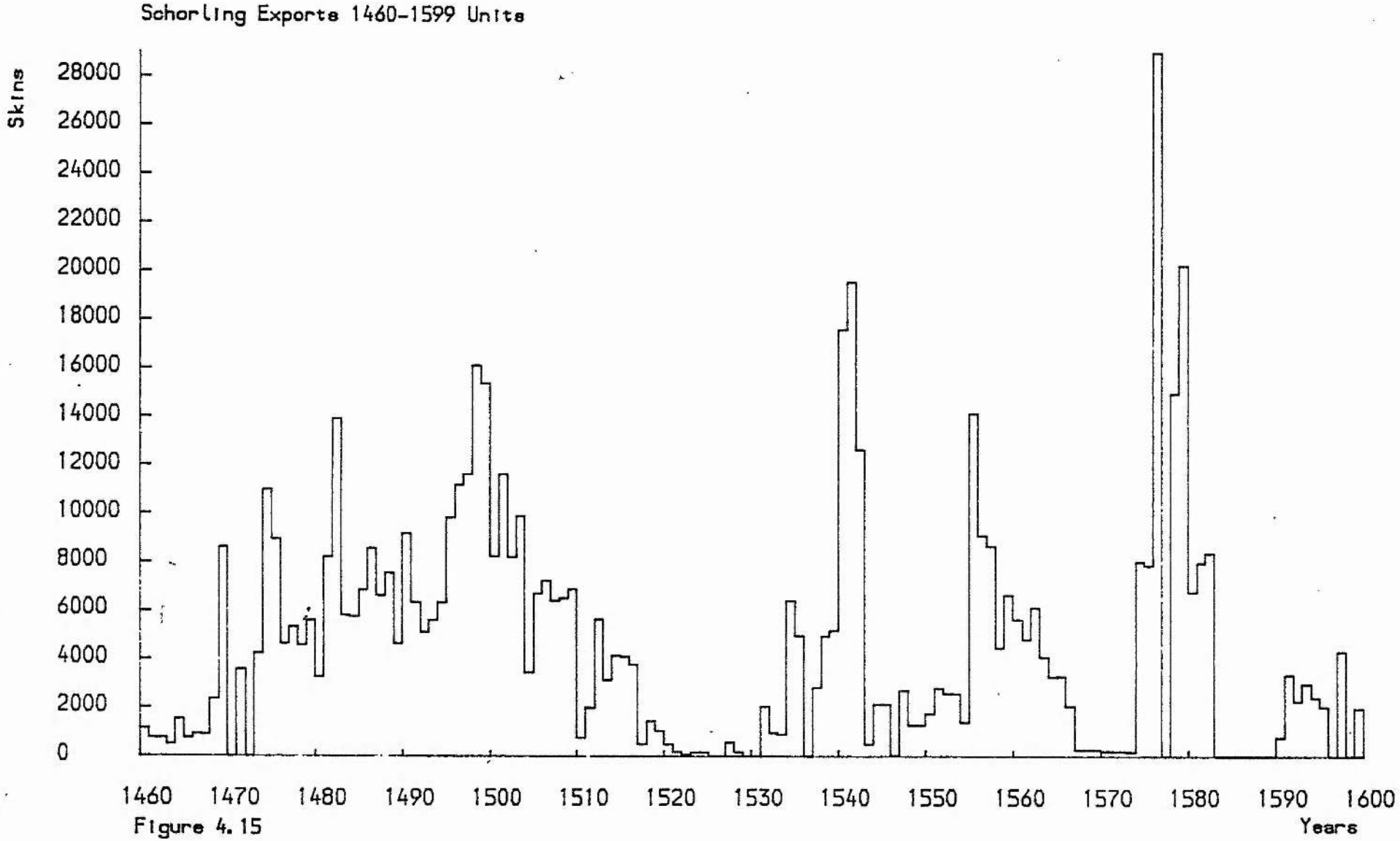
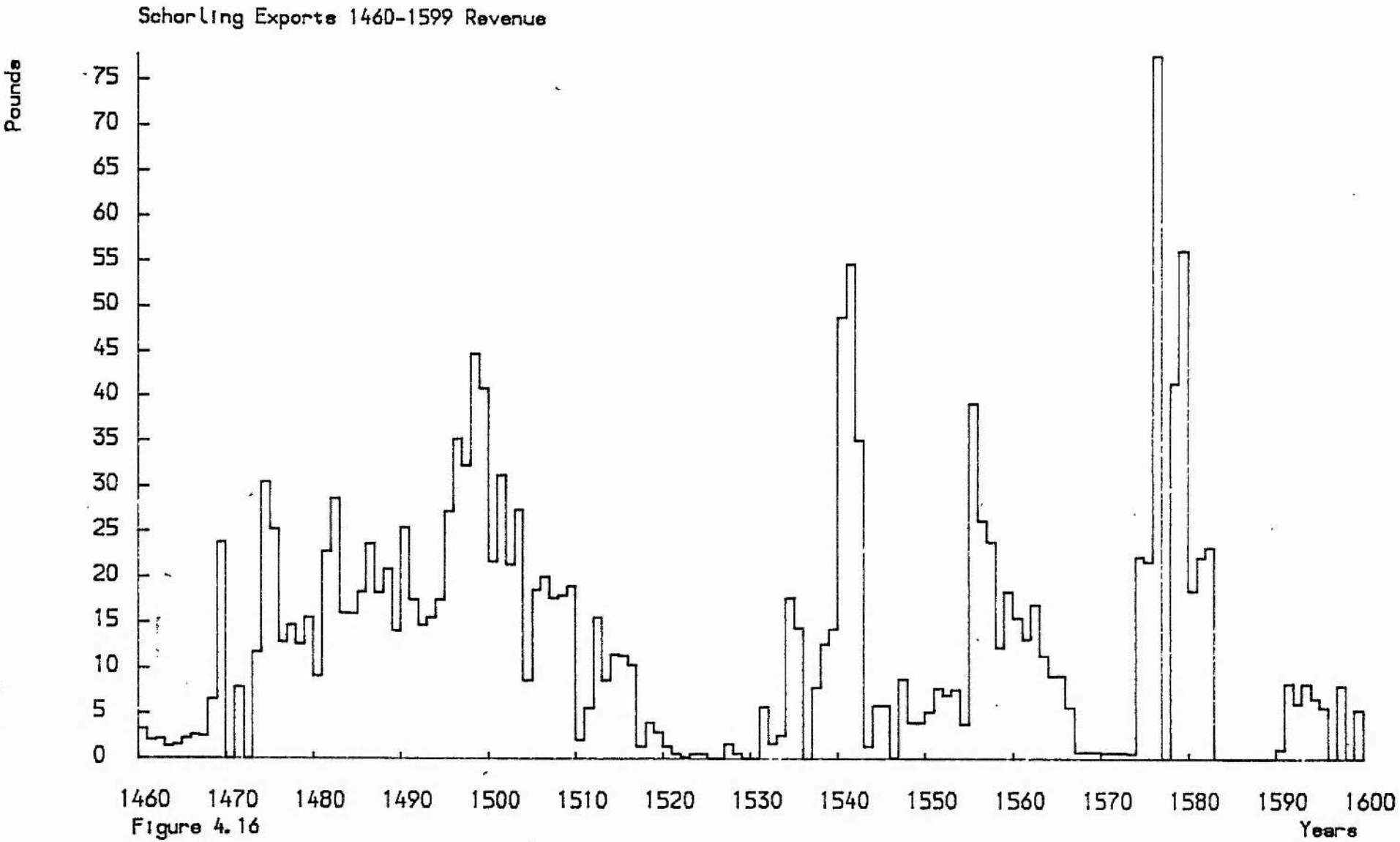

Skins (Grouped) Exports 1460-1599 Revenue Decade Mean
1 Lamb Skin
2 Schorling
3 Miscellaneous Skins
4 Futefell
5 Scalding
Pounds
100
90
80
70
60
50
40
30
20
10
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
Decades

Figure 4.14


Schorling Exports 1460-1599 Units
Skins
28000
26000
24000
22000
20000
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
1600
Years
Figure 4.15


Schorling Exports 1460-1599 Revenue
Pounds
75
70
65
60
55
50
45
40
35
30
25
20
15
10
5
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
1600
Years
Figure 4.16

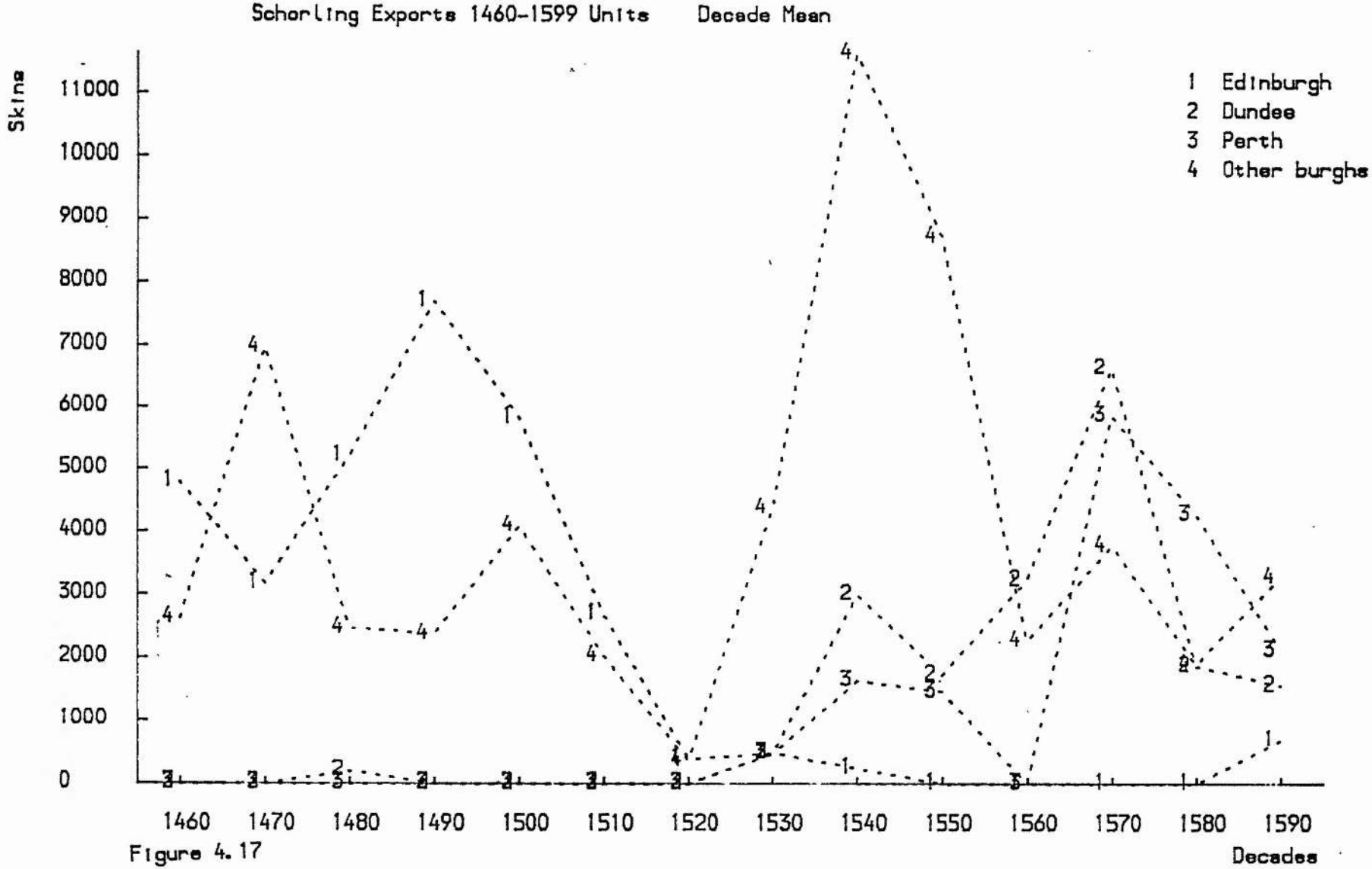

Schorling Exports 1460-1599 Units Decade Mean
Skins
11000
10000
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
Decades
1 Edinburgh
2 Dundee
3 Perth
4 Other burghs

Figure 4.17

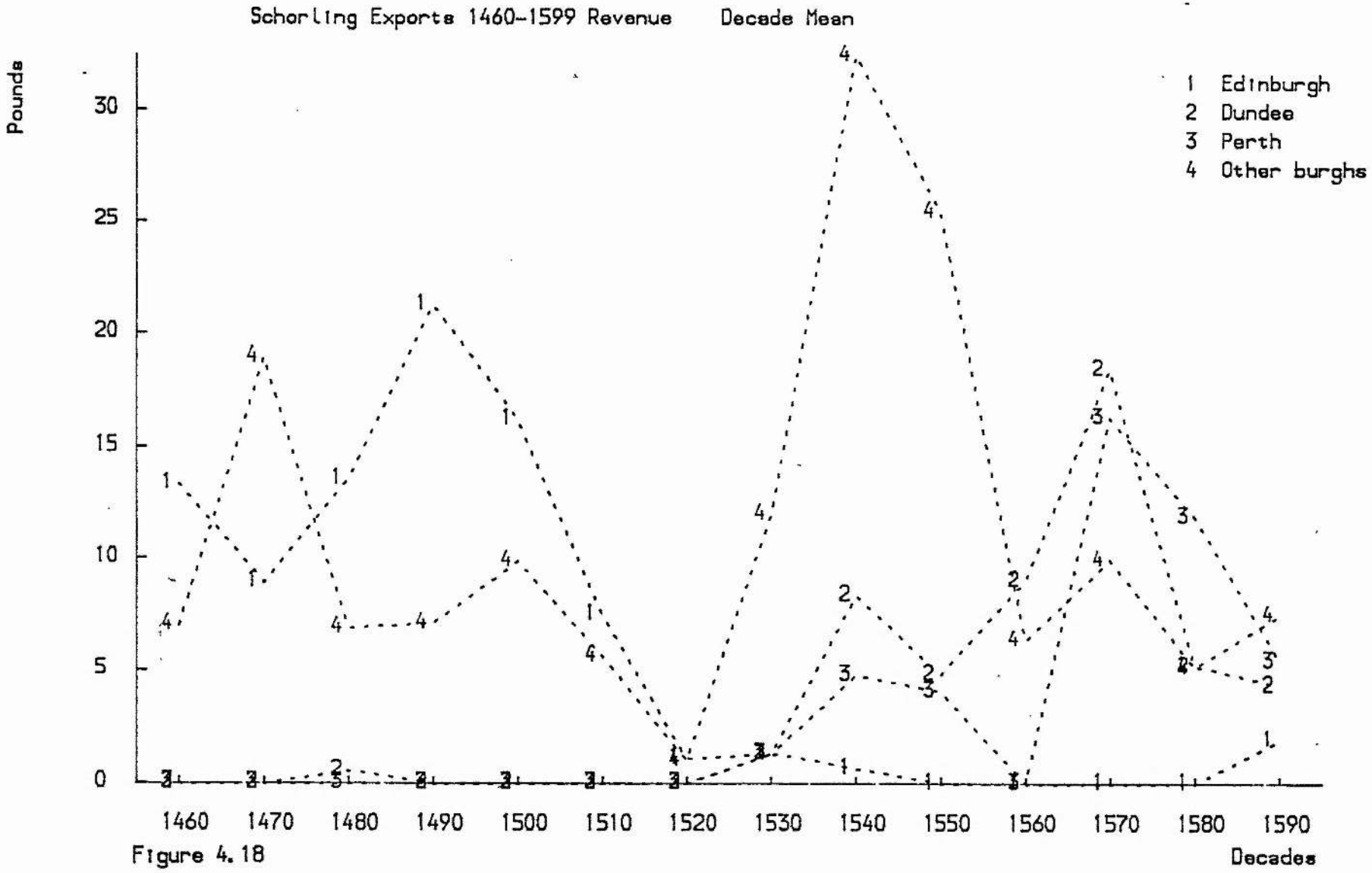
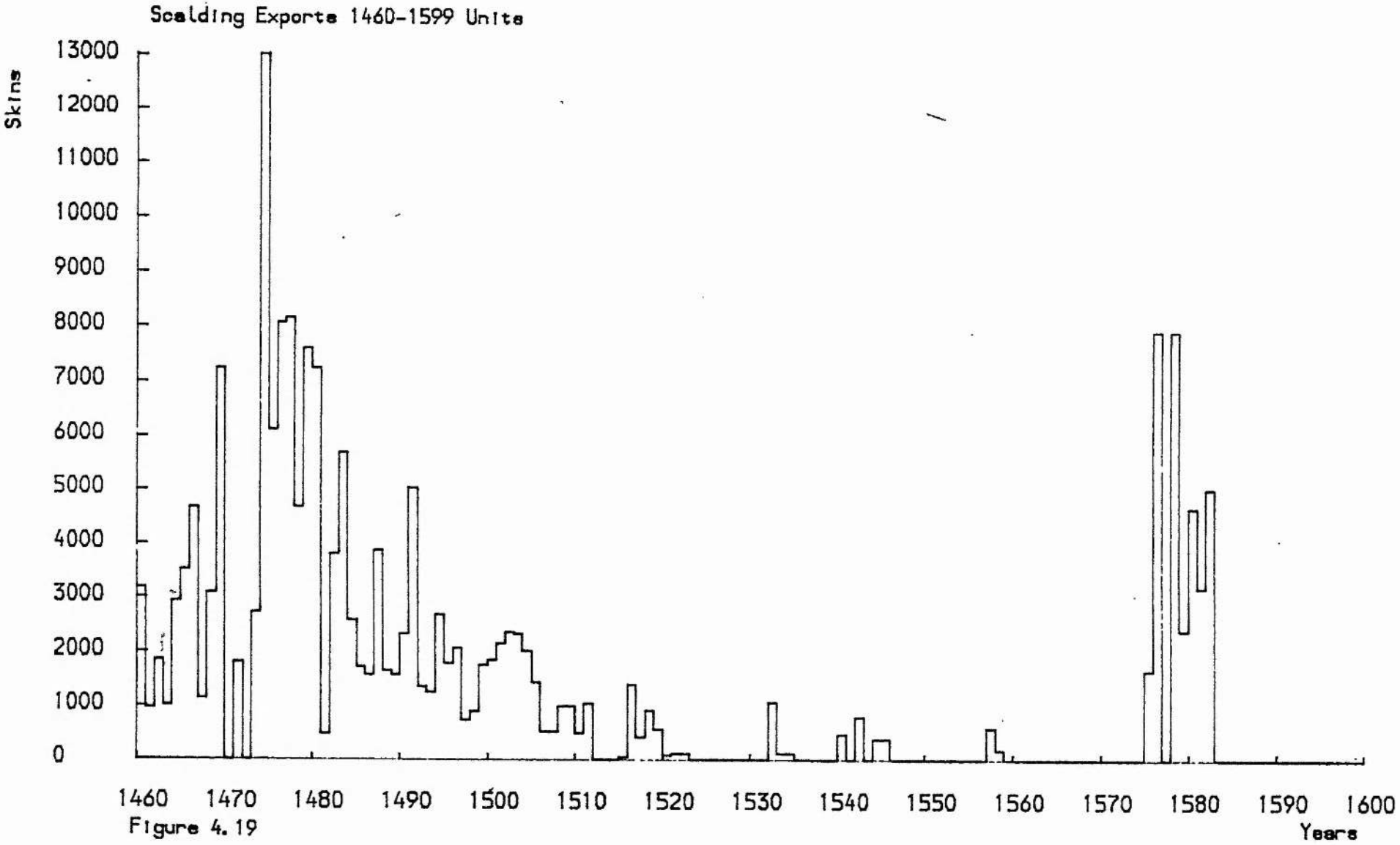
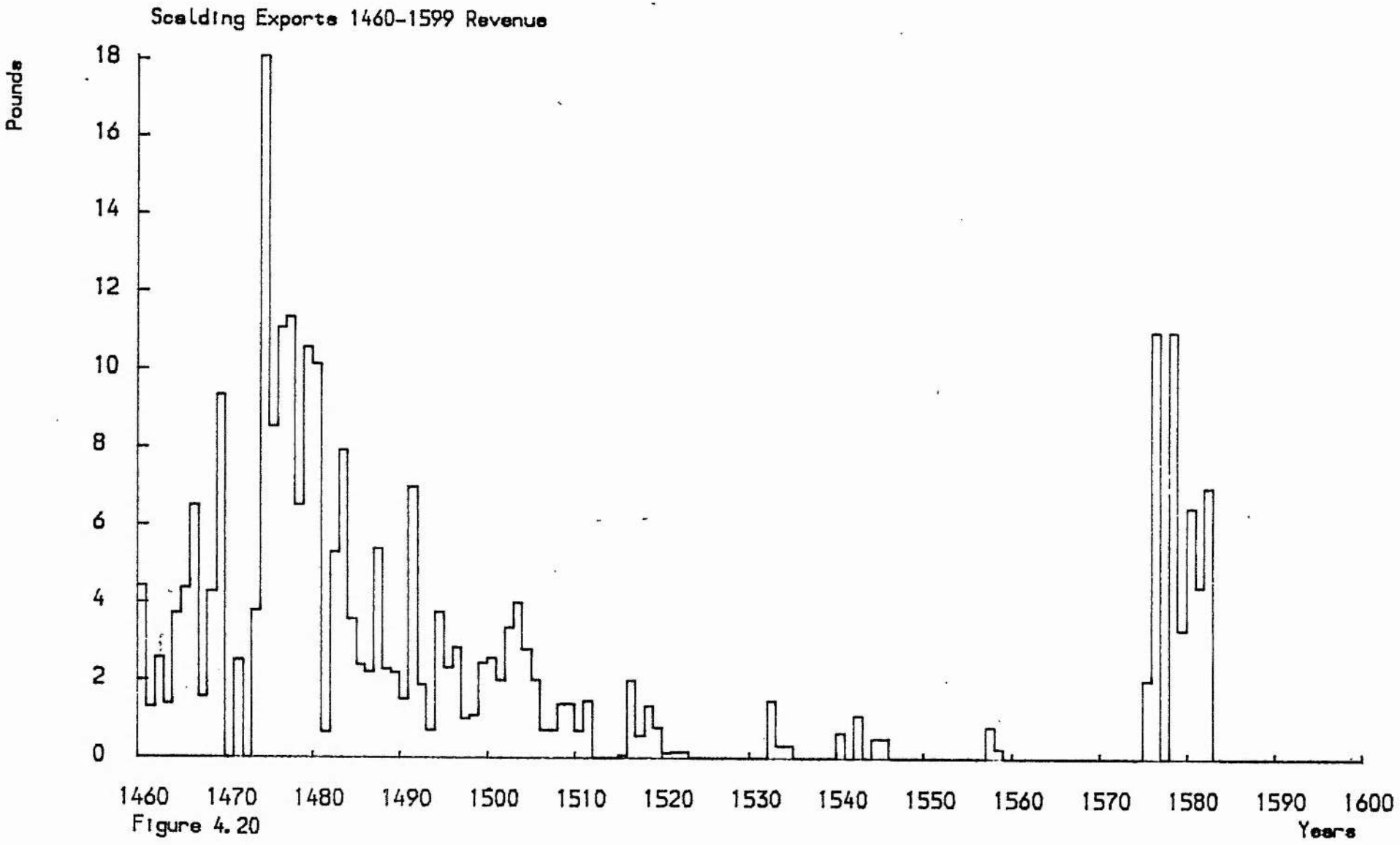

Schorling Exports 1460-1599 Revenue Decade Mean
Pounds
30
25
20
15
10
5
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
Decades
1 Edinburgh
2 Dundee
3 Perth
4 Other burghs

Figure 4.18


Scalding Exports 1460-1599 Units
Skins
13000
12000
11000
10000
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
1600
Years
Figure 4.19


Scalding Exports 1460-1599 Revenue
Pounds
18
16
14
12
10
8
6
4
2
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
1600
Years
Figure 4.20

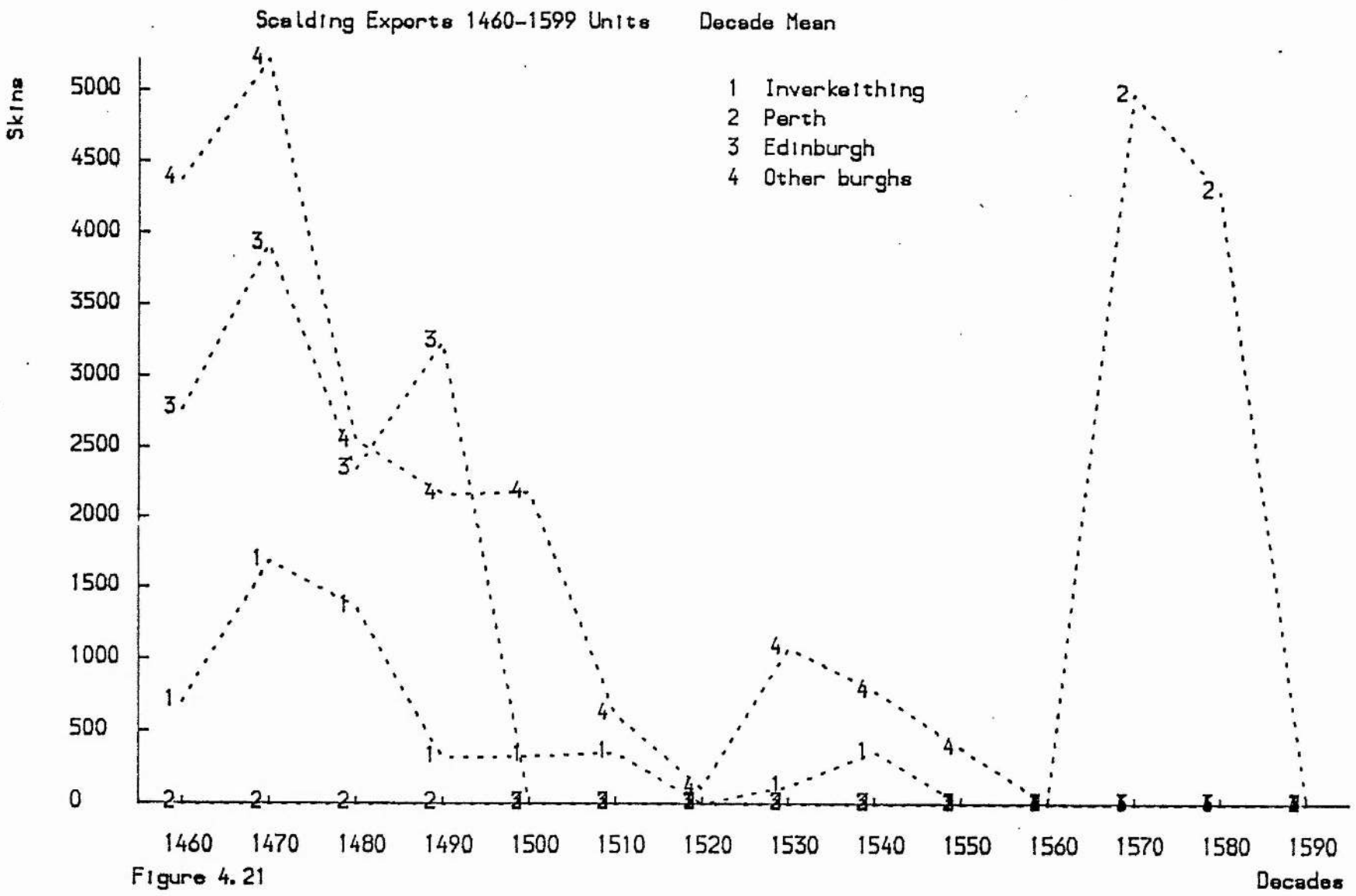

Scalding Exports 1460-1599 Units
Decade Mean
Skins
1 Inverkeithing
2 Perth
3 Edinburgh
4 Other burghs
5000
4500
4000
3500
3000
2500
2000
1500
1000
500
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
Decades

Figure 4.21

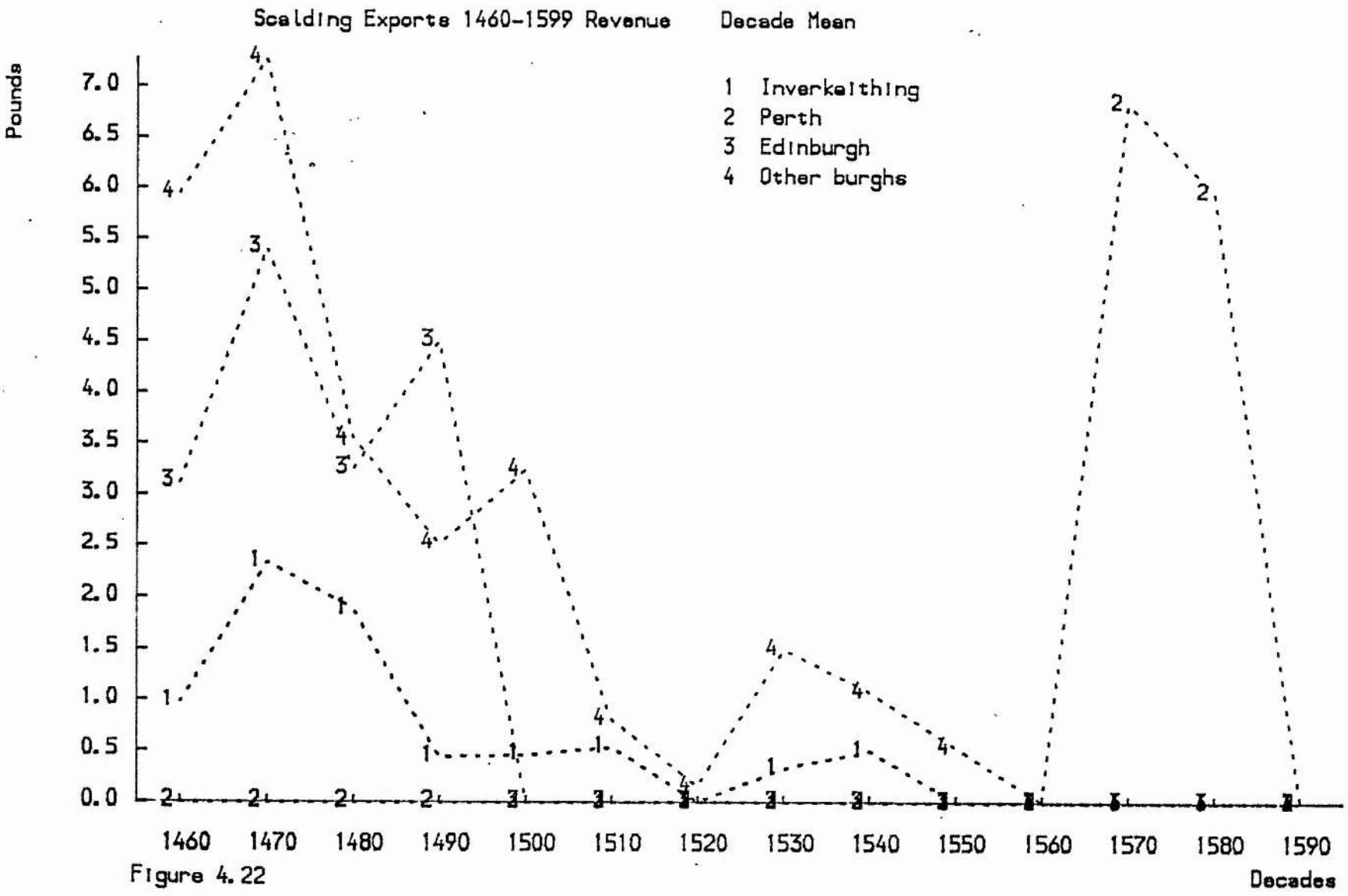

Scalding Exports 1460-1599 Revenue
Decade Mean
1 Inverkeithing
2 Perth
3 Edinburgh
4 Other burghs
Pounds
7.0
6.5
6.0
5.5
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
Decades

Figure 4.22

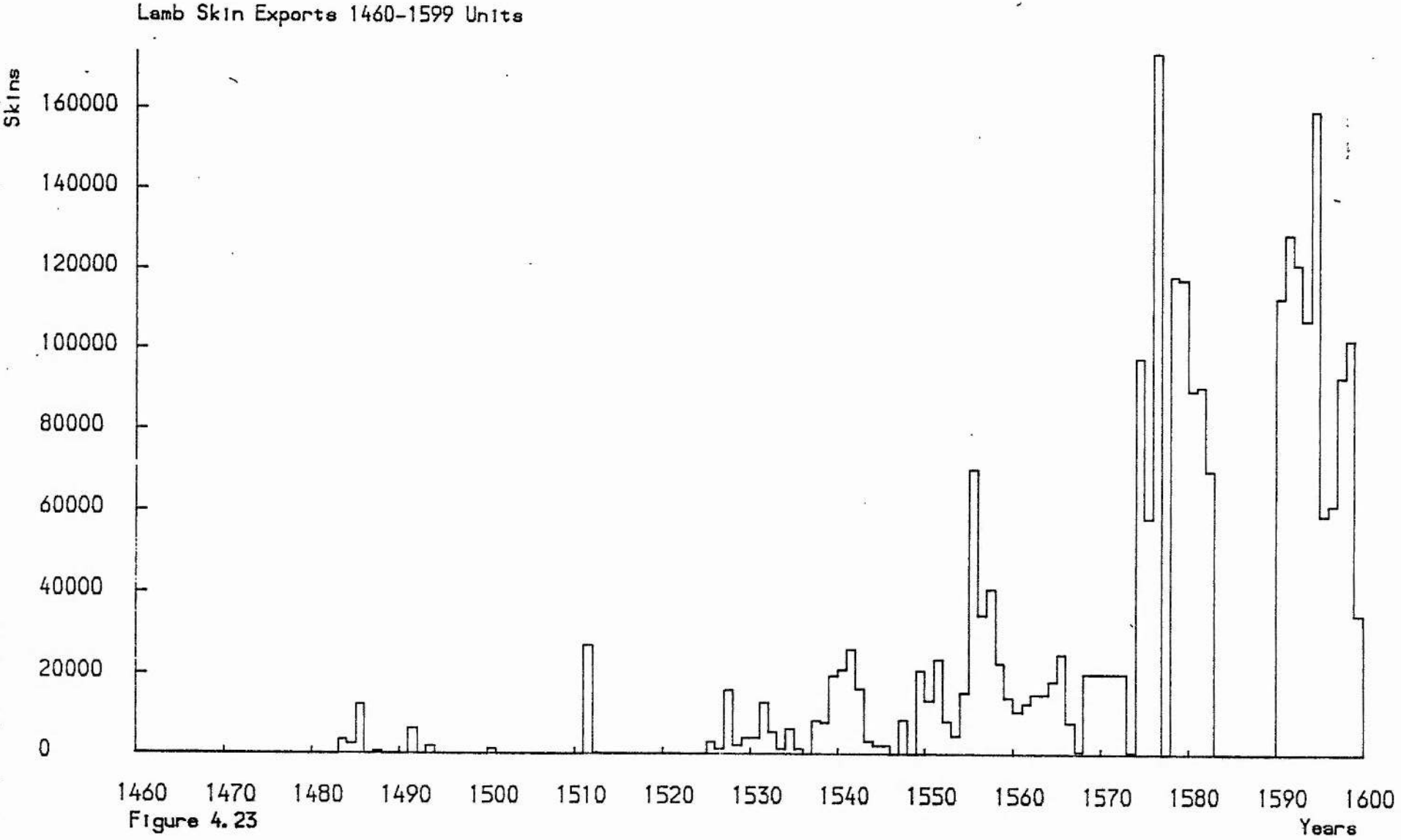
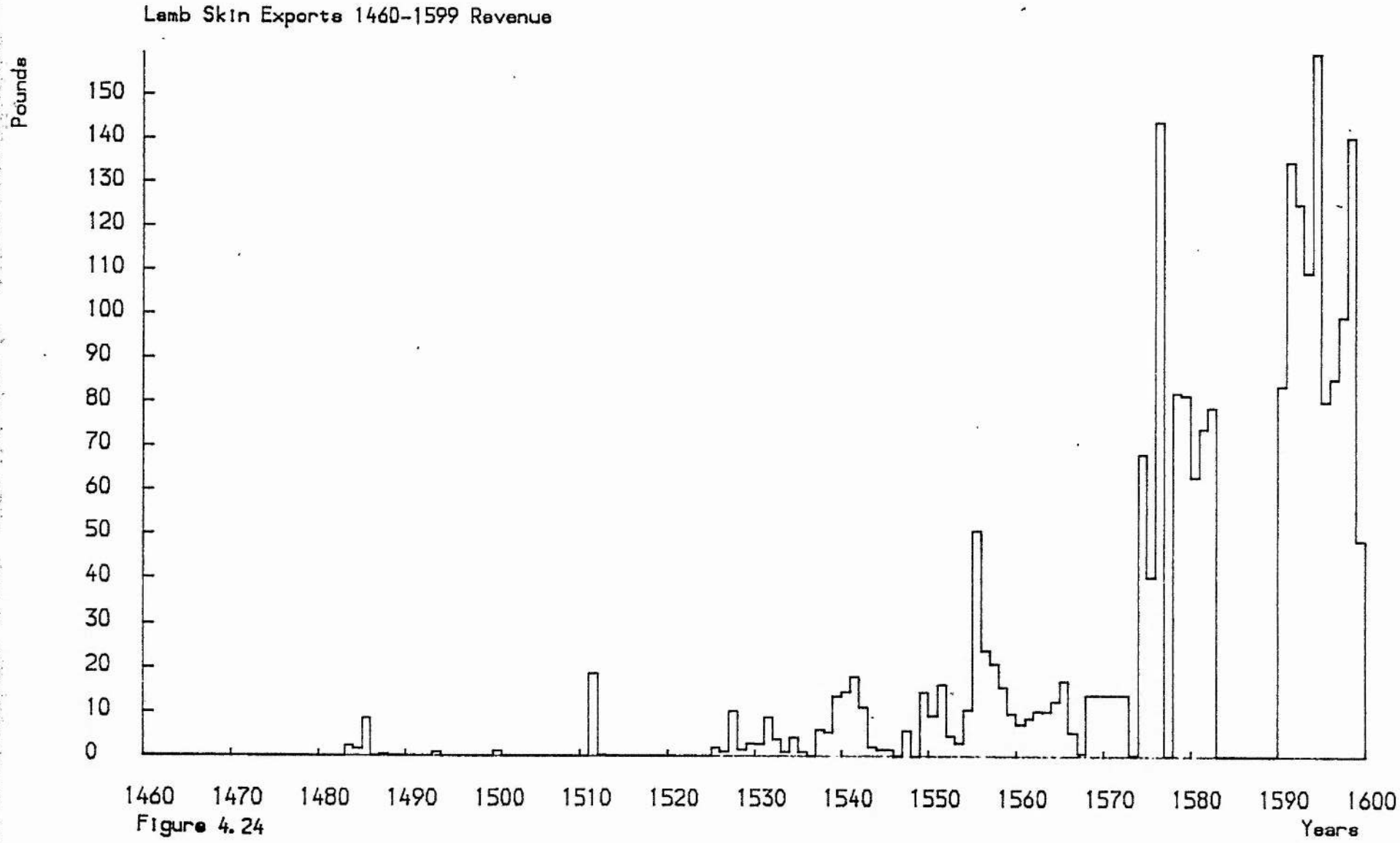

Lamb Skin Exports 1460-1599 Units
Skins
160000
140000
120000
100000
80000
60000
40000
20000
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
1600
Years

Figure 4.23


Lamb Skin Exports 1460-1599 Revenue
Pounds
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
1600
Years
Figure 4.24

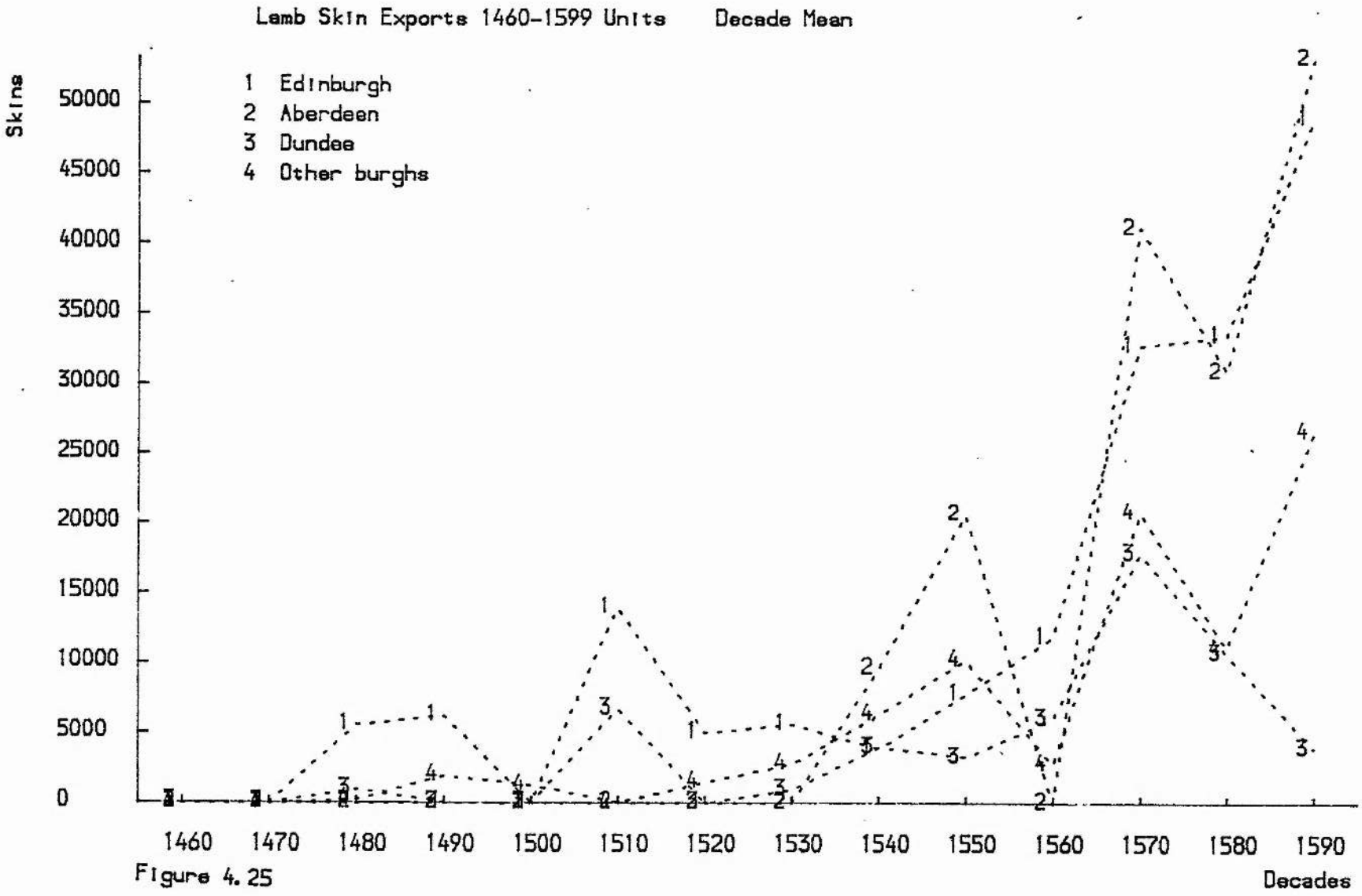

Lamb Skin Exports 1460-1599 Units Decade Mean
1 Edinburgh
2 Aberdeen
3 Dundee
4 Other burghs
Skins
50000
45000
40000
35000
30000
25000
20000
15000
10000
5000
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
Decades

Figure 4.25

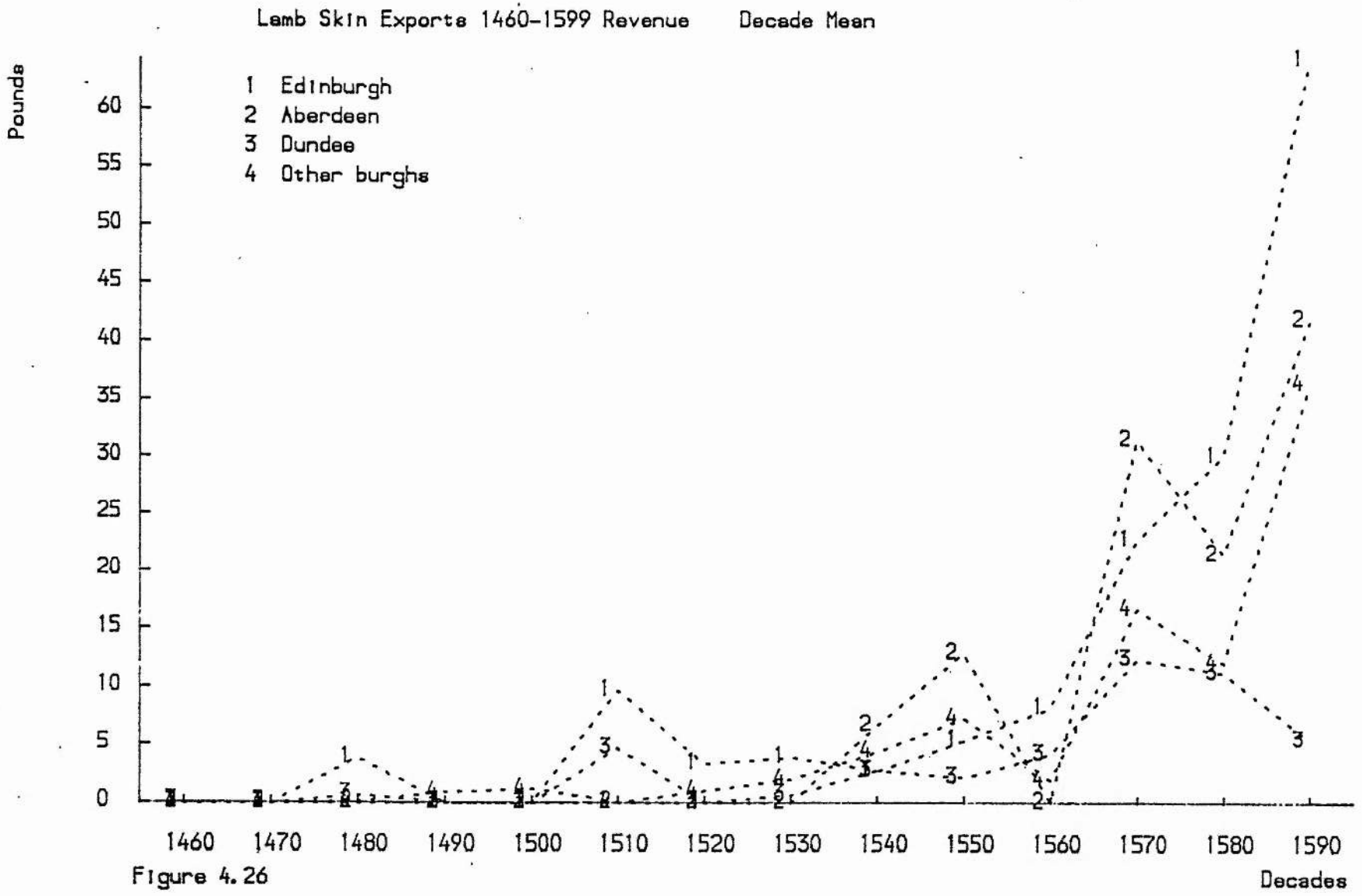
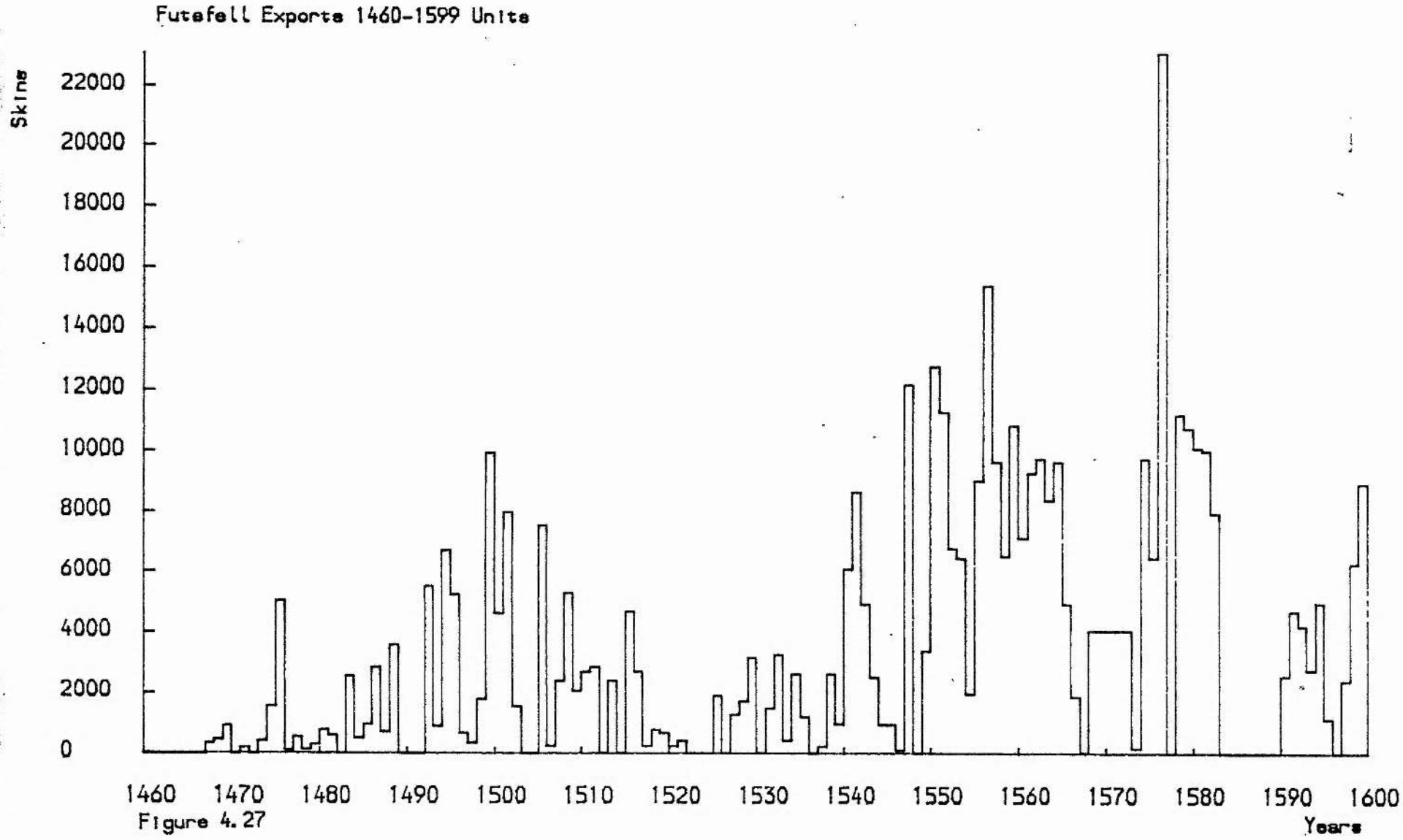
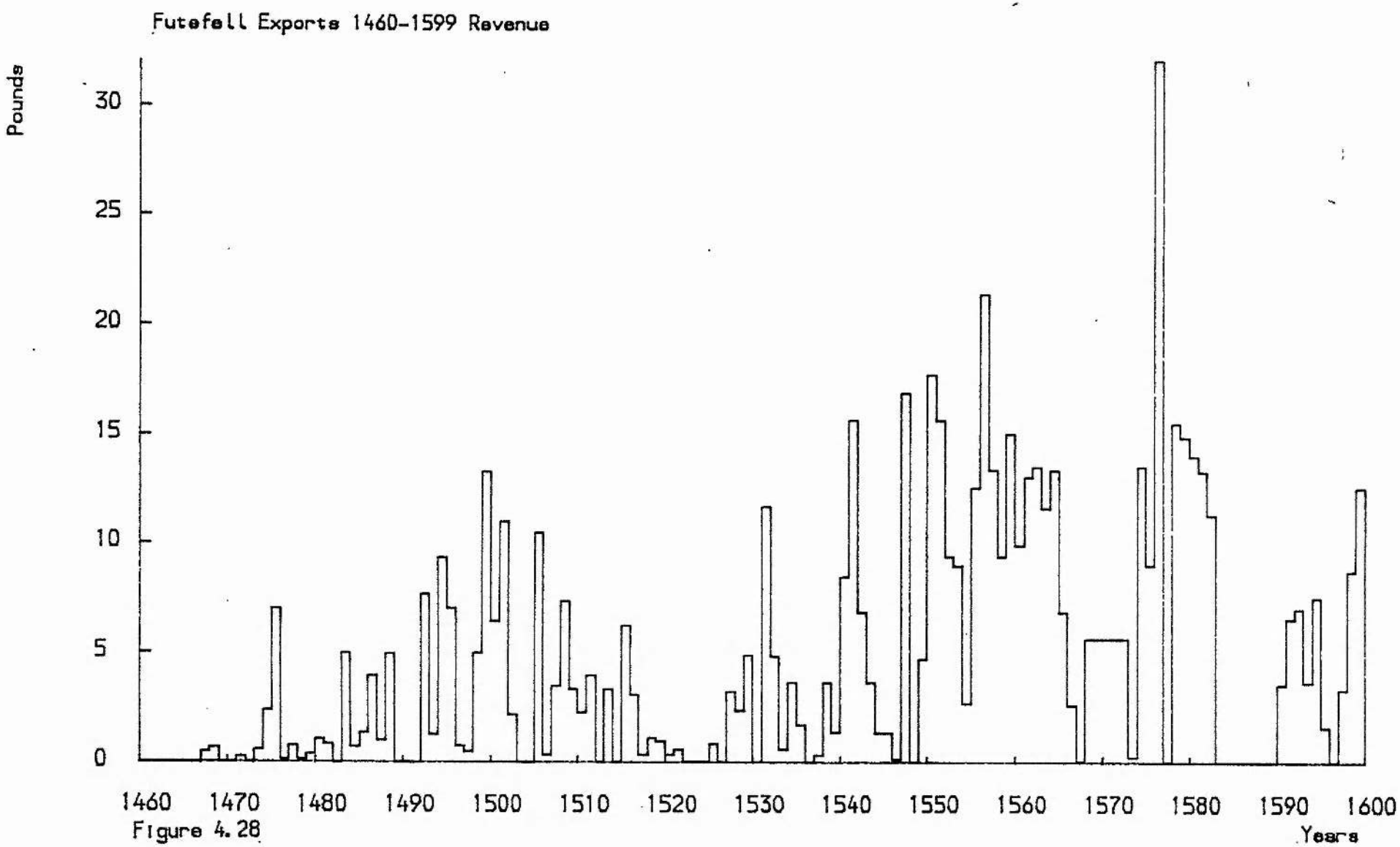

Lamb Skin Exports 1460-1599 Revenue Decade Mean
1 Edinburgh
2 Aberdeen
3 Dundee
4 Other burghs
Pounds
60
55
50
45
40
35
30
25
20
15
10
5
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
Decades

Figure 4.26


Futefell Exports 1460-1599 Units
Skins
22000
20000
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
1600
Years
Figure 4.27


Futefell Exports 1460-1599 Revenue
Pounds
30
25
20
15
10
5
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
1600
Years
Figure 4.28

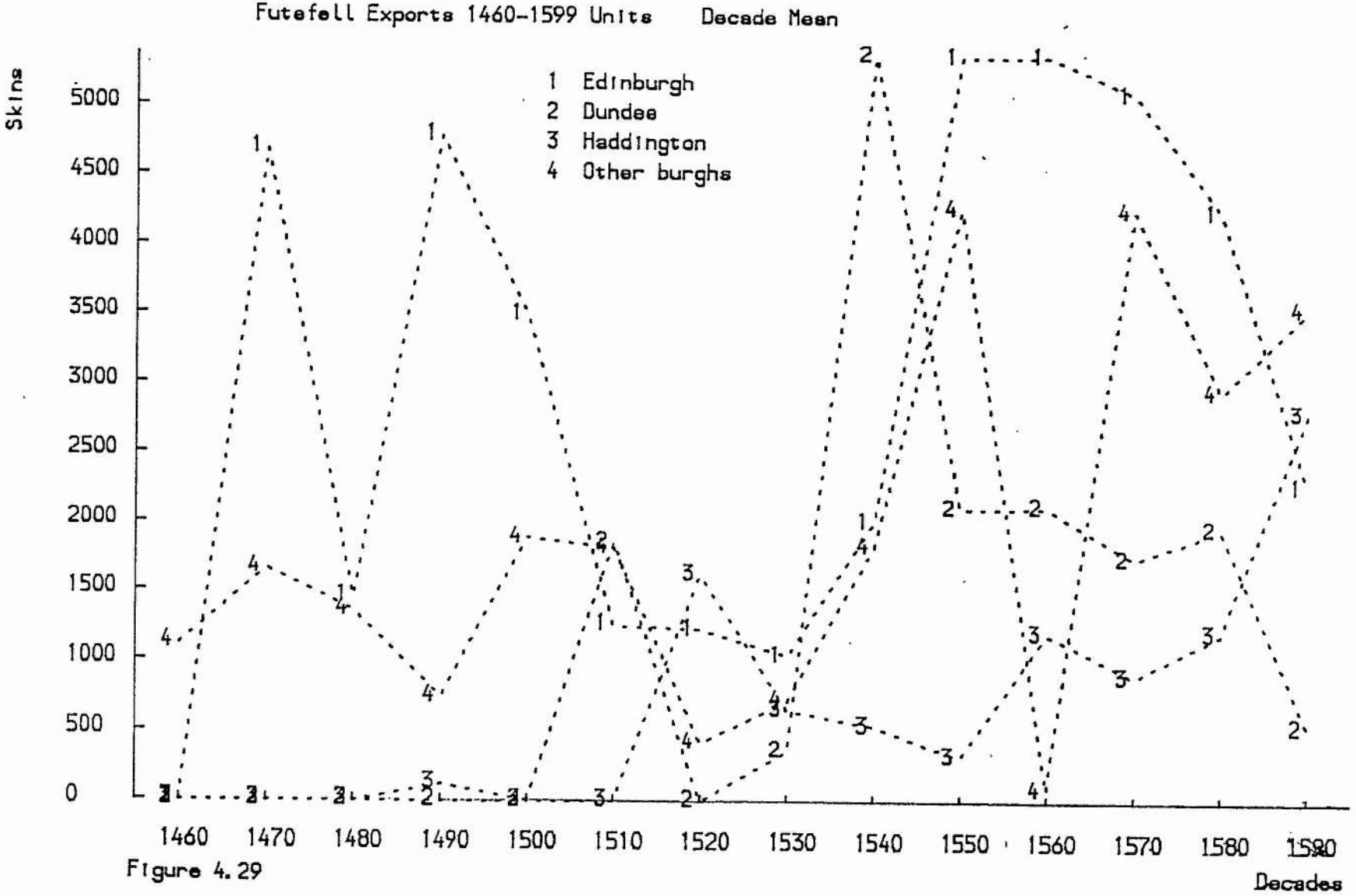

Futefell Exports 1460-1599 Units Decade Mean
Skins
1 Edinburgh
2 Dundee
3 Haddington
4 Other burghs
5000
4500
4000
3500
3000
2500
2000
1500
1000
500
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
Decades

Figure 4.29

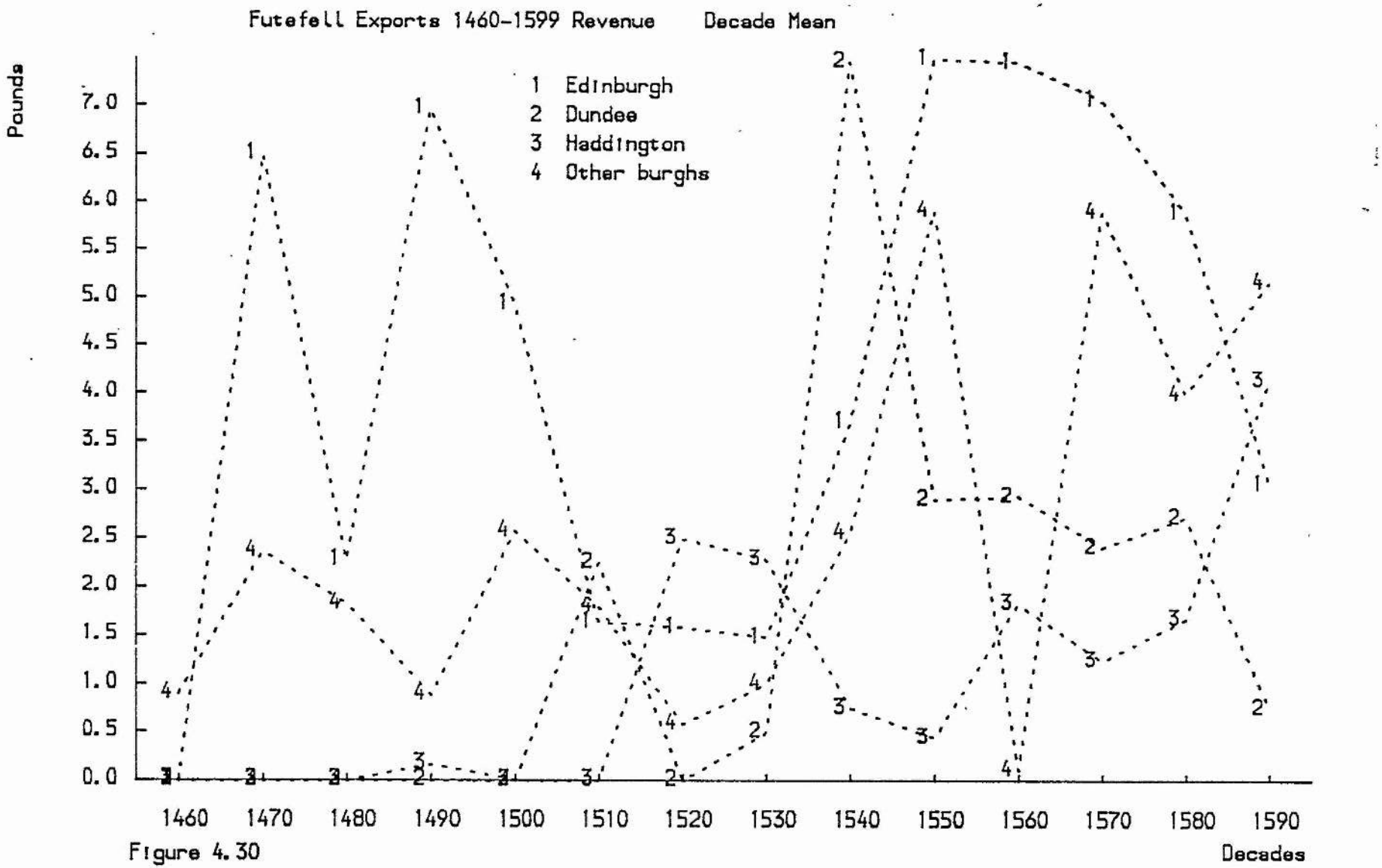
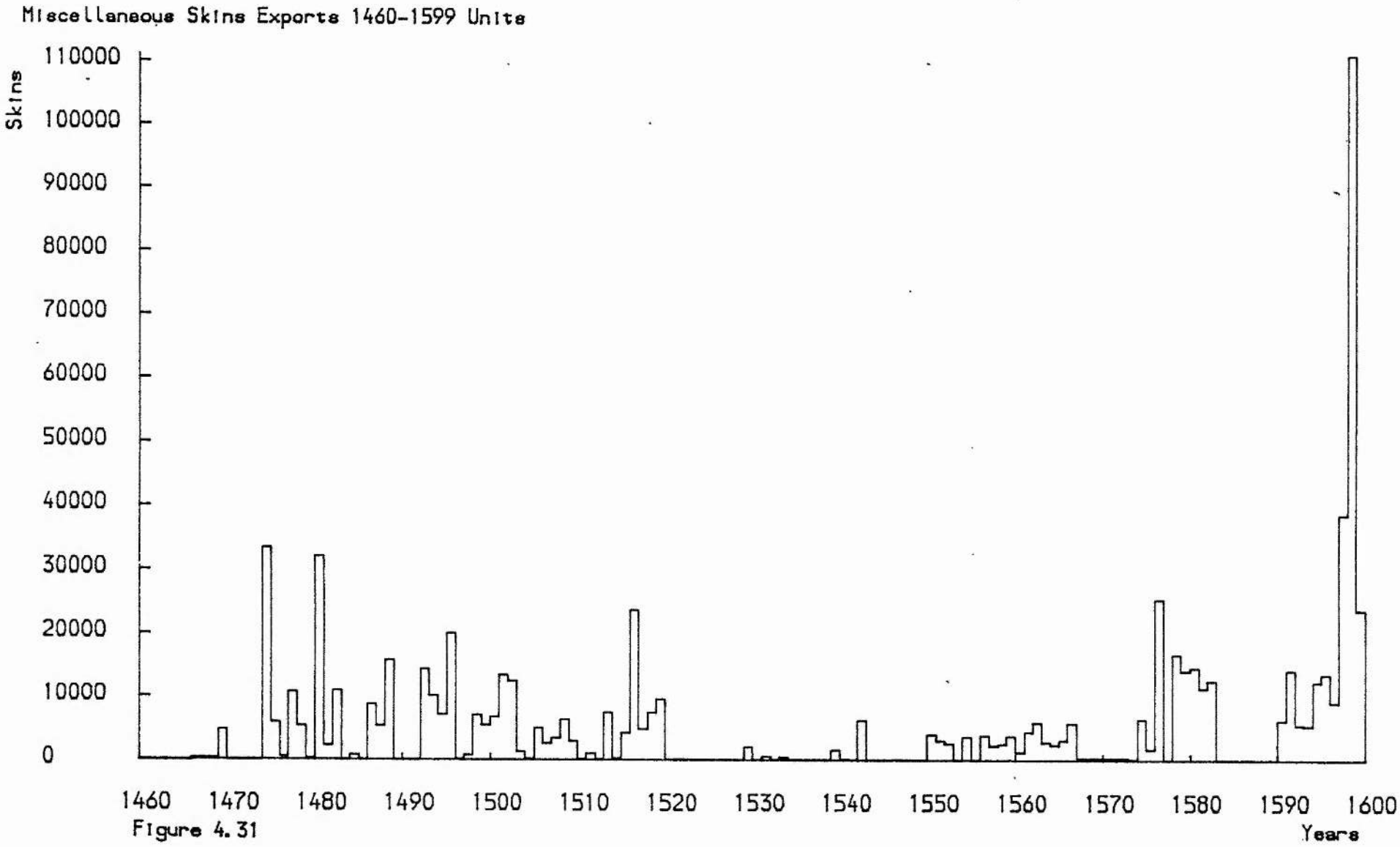
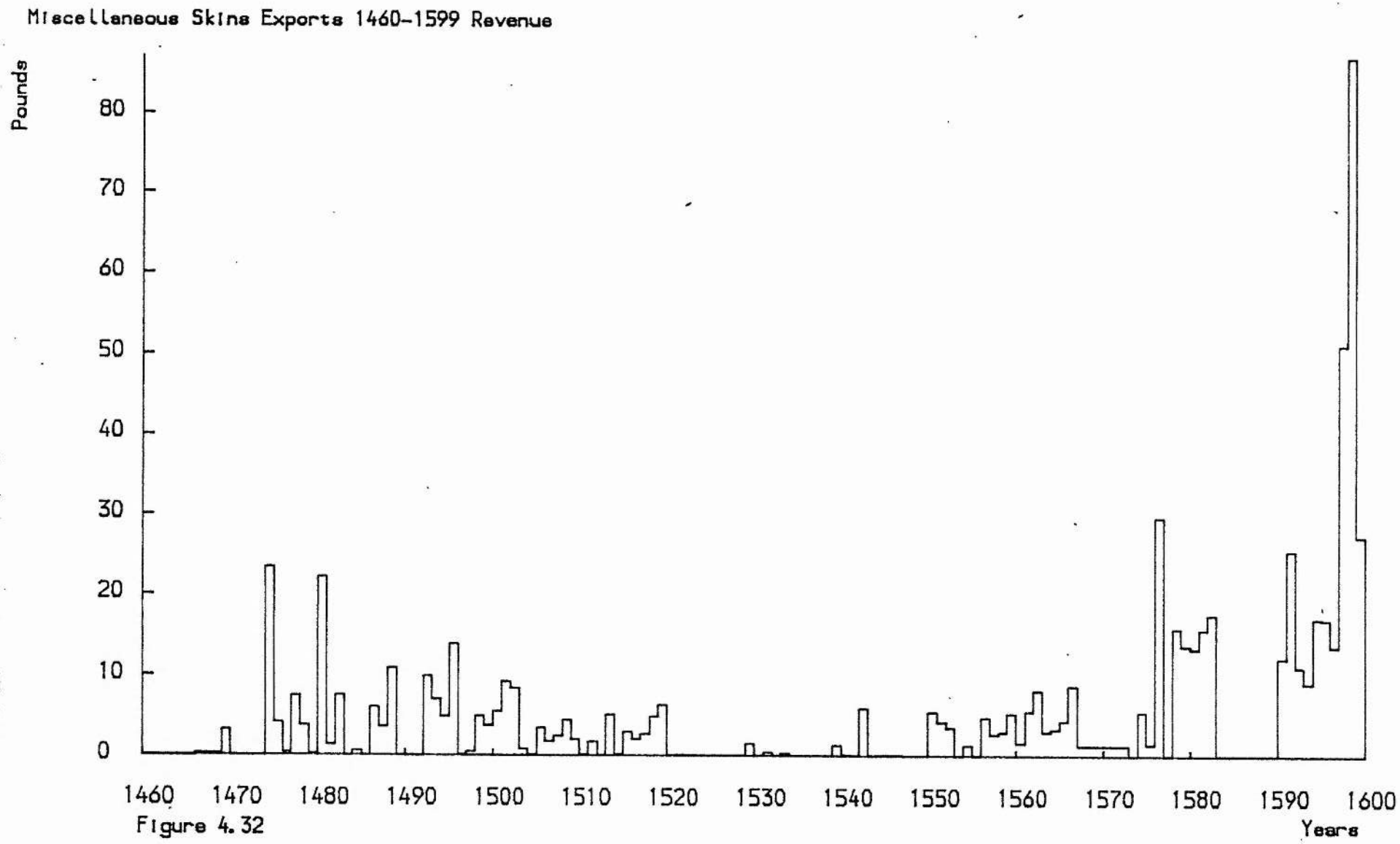

Futefell Exports 1460-1599 Revenue Decade Mean
Pounds
1 Edinburgh
2 Dundee
3 Haddington
4 Other burghs
7.0
6.5
6.0
5.5
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
Decades

Figure 4.30


Miscellaneous Skins Exports 1460-1599 Units
Skins
110000
100000
90000
80000
70000
60000
50000
40000
30000
20000
10000
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
1600
Years
Figure 4.31


Miscellaneous Skins Exports 1460-1599 Revenue
Pounds
80
70
60
50
40
30
20
10
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
1600
Years
Figure 4.32

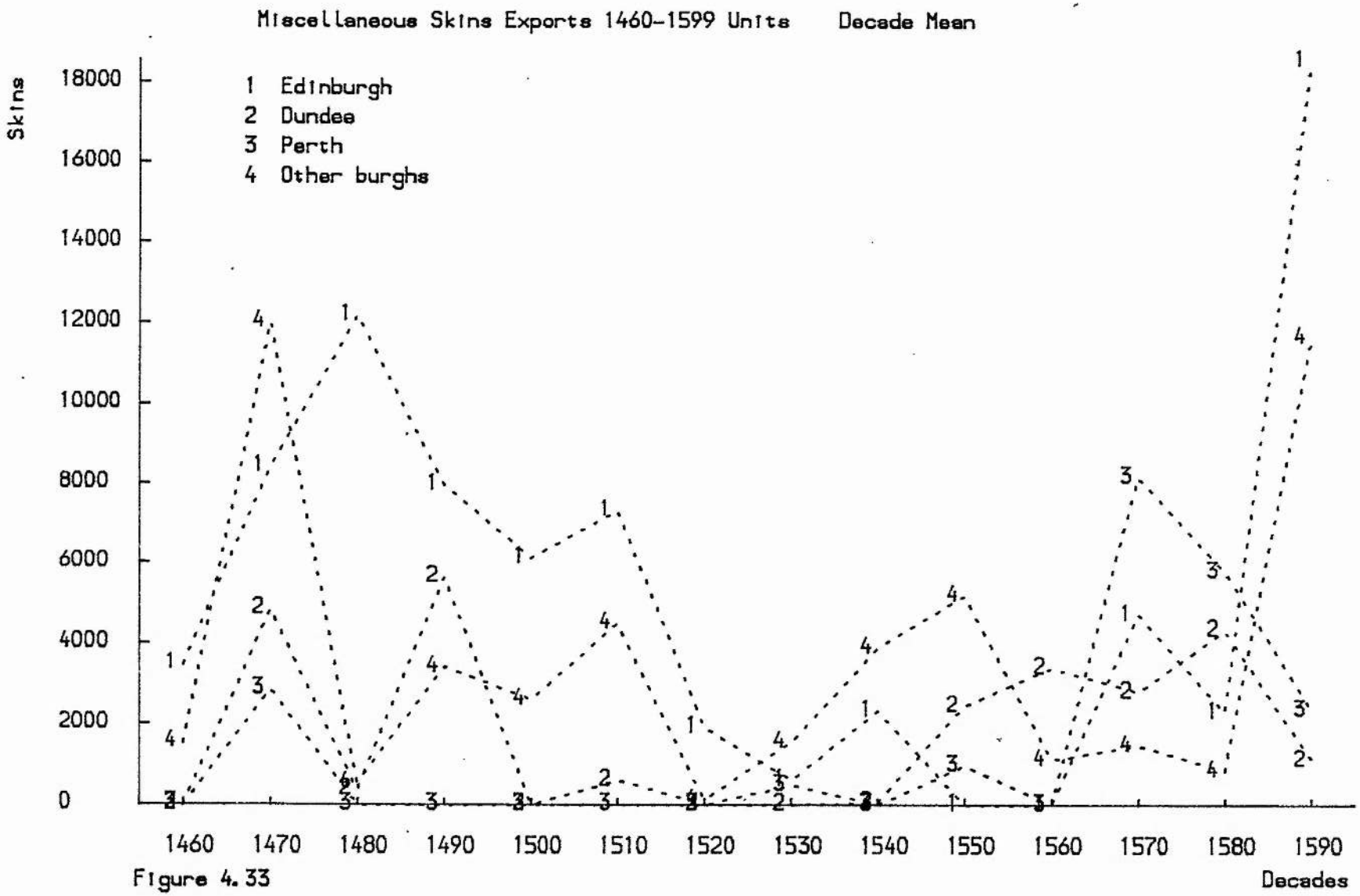

Miscellaneous Skins Exports 1460-1599 Units Decade Mean
Skins
1 Edinburgh
2 Dundee
3 Perth
4 Other burghs
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
Decades

Figure 4.33

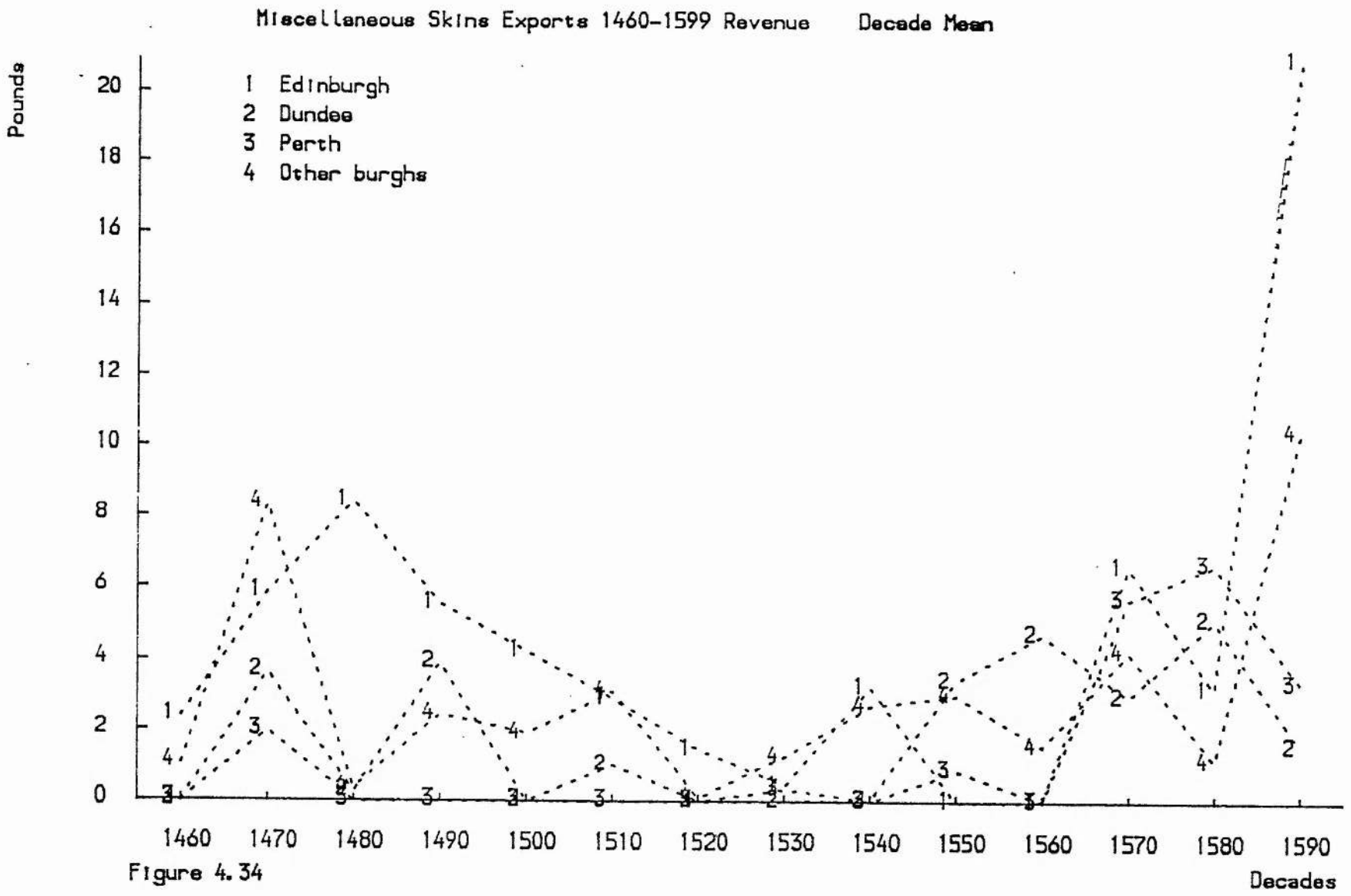

Miscellaneous Skins Exports 1460–1599 Revenue Decade Mean
Pounds
1 Edinburgh
2 Dundee
3 Perth
4 Other burghs
20
18
16
14
12
10
8
6
4
2
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
Decades

Figure 4.34

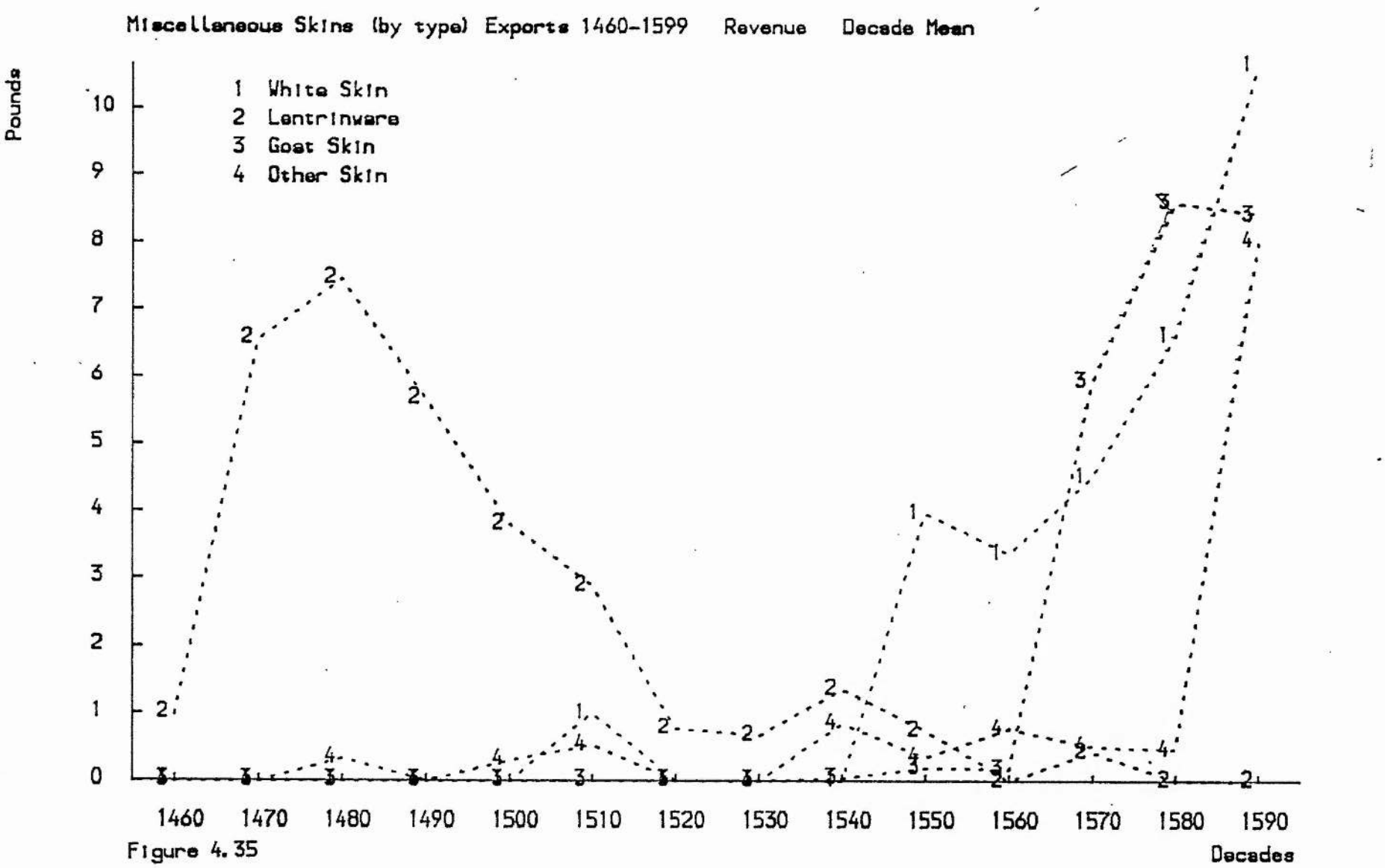

Miscellaneous Skins (by type) Exports 1460-1599 Revenue Decade Mean
Pounds
1 White Skin
2 Lentrinware
3 Goat Skin
4 Other Skin
10
9
8
7
6
5
4
3
2
1
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
Decades

Figure 4.35

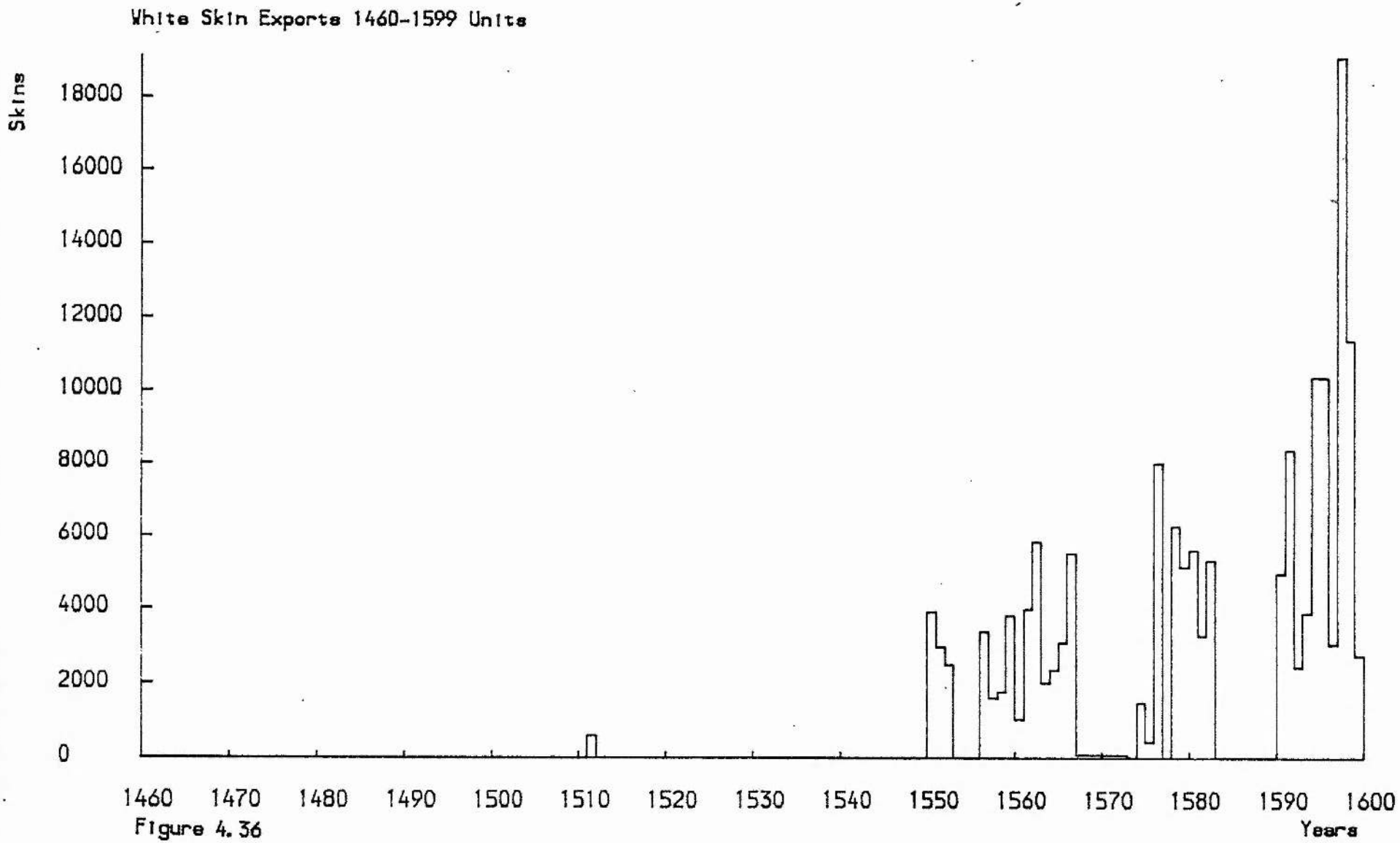

White Skin Exports 1460-1599 Units
Skins
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
1600
Years

Figure 4.36

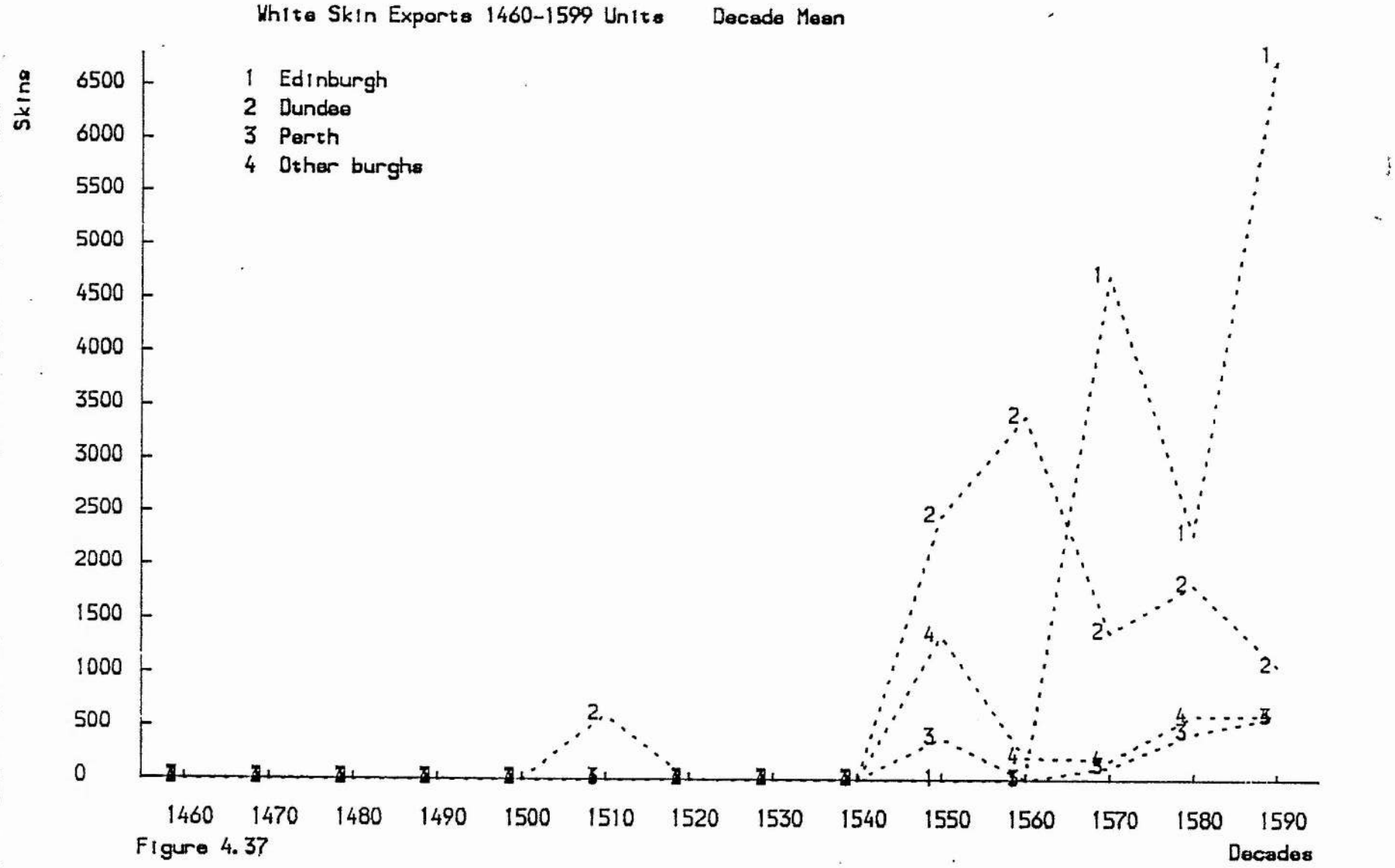

White Skin Exports 1460-1599 Units Decade Mean
Skins
1 Edinburgh
2 Dundee
3 Perth
4 Other burghs
6500
6000
5500
5000
4500
4000
3500
3000
2500
2000
1500
1000
500
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
Decades

Figure 4.37

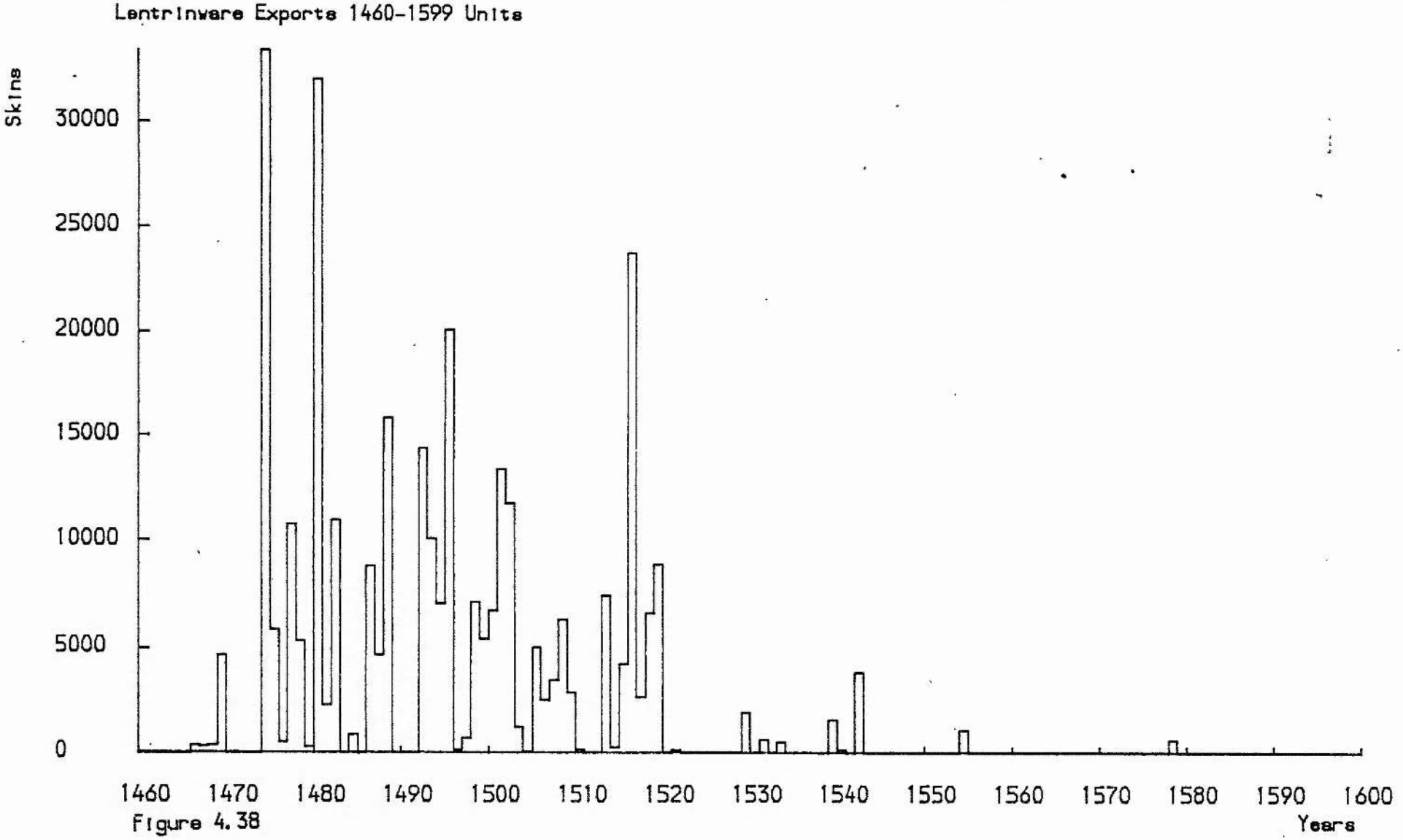

Lentrinware Exports 1460-1599 Units
Skins
30000
25000
20000
15000
10000
5000
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
1600
Years

Figure 4.38

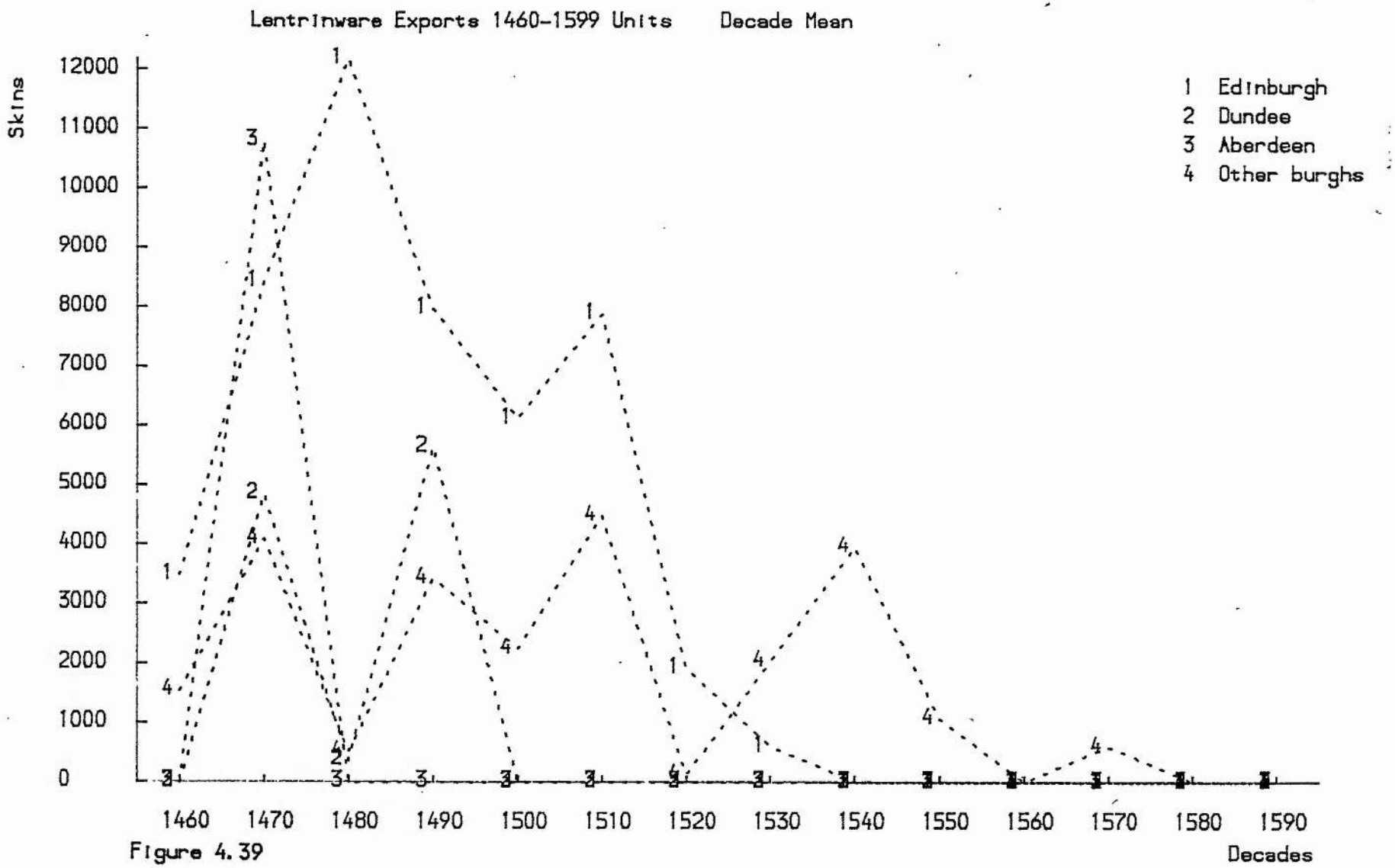
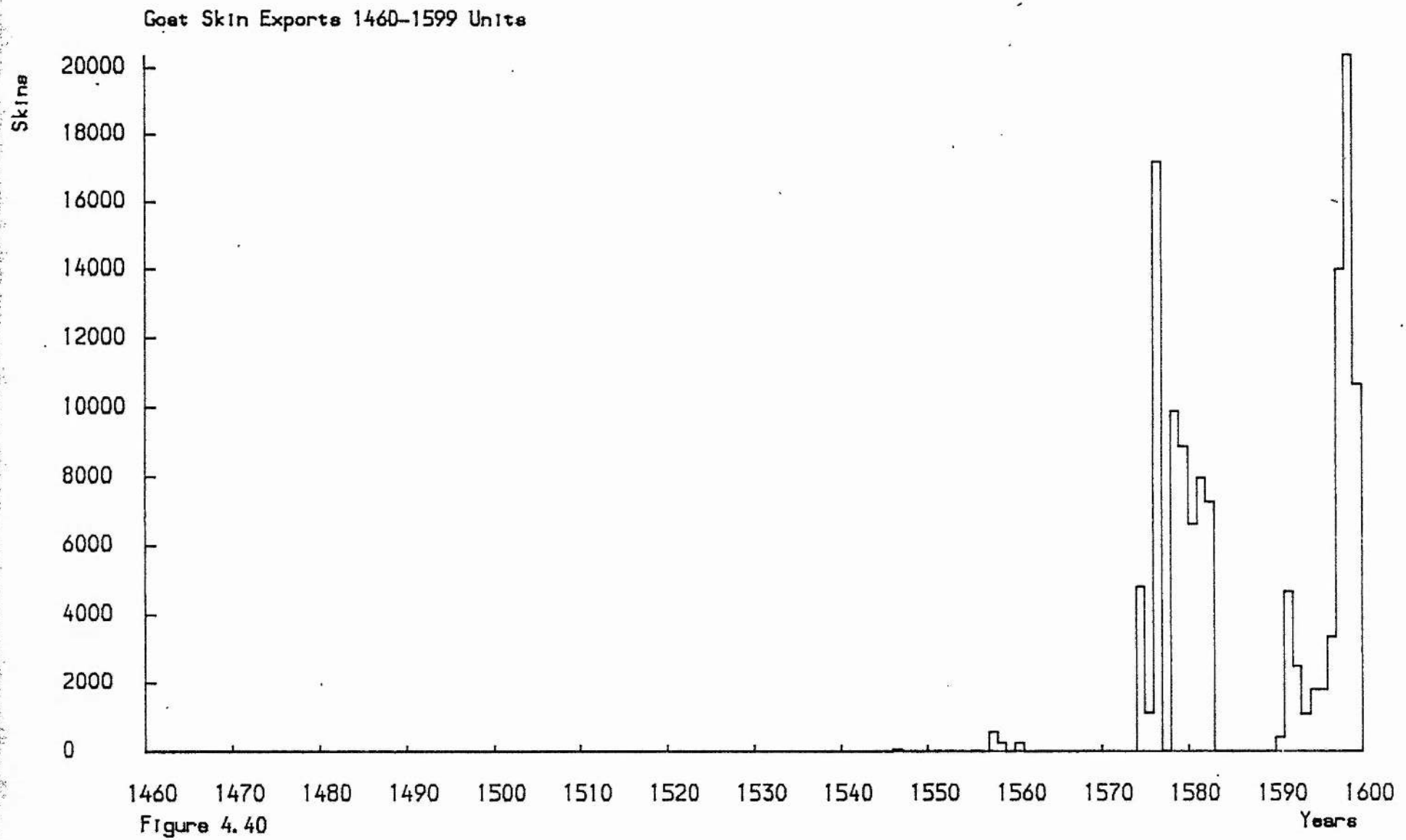

Lentrinware Exports 1460-1599 Units Decade Mean
Skins
12000
11000
10000
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
Decades
1 Edinburgh
2 Dundee
3 Aberdeen
4 Other burghs

Figure 4.39


Goat Skin Exports 1460–1599 Units
Skins
20000
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
1600
Years
Figure 4.40

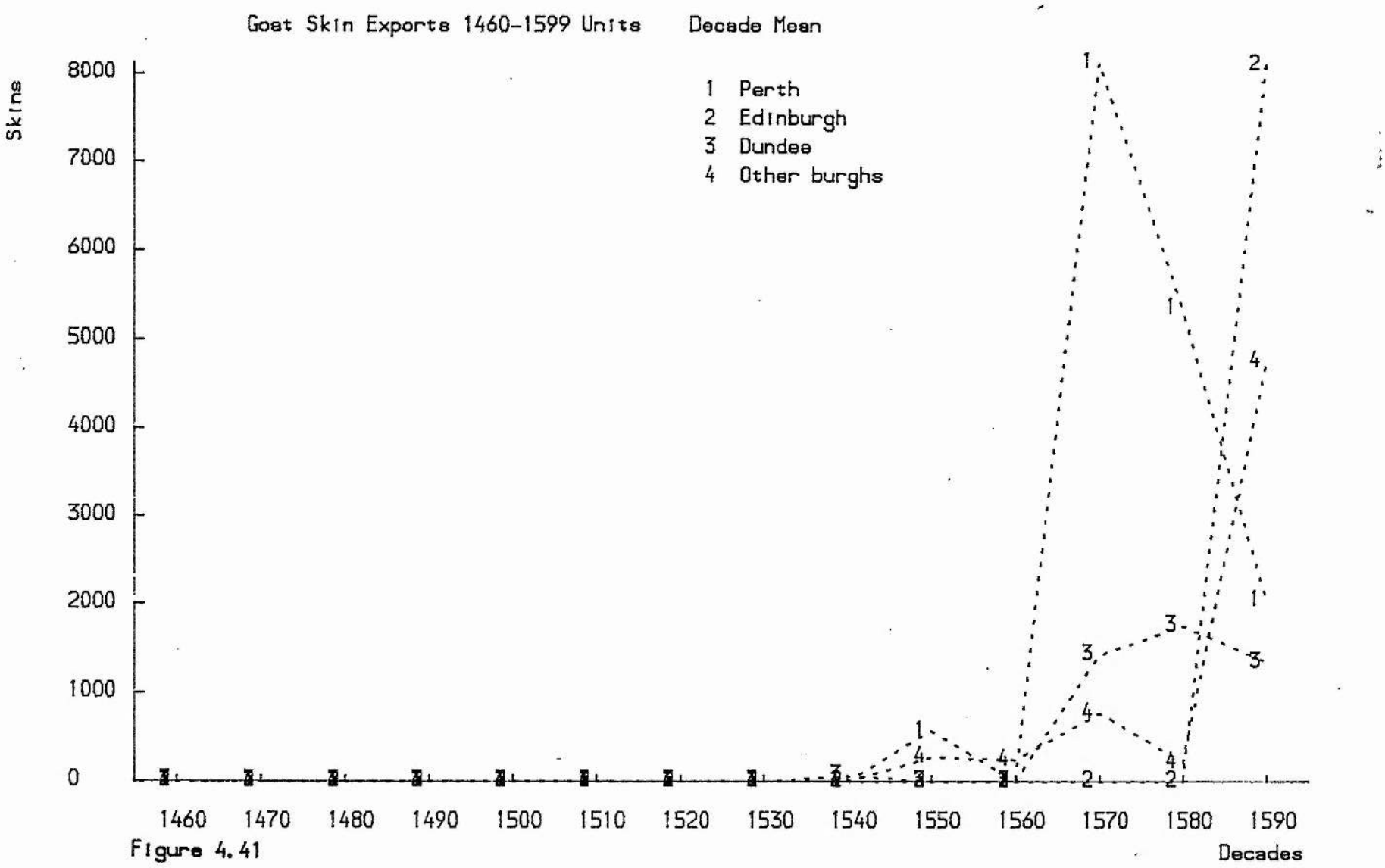
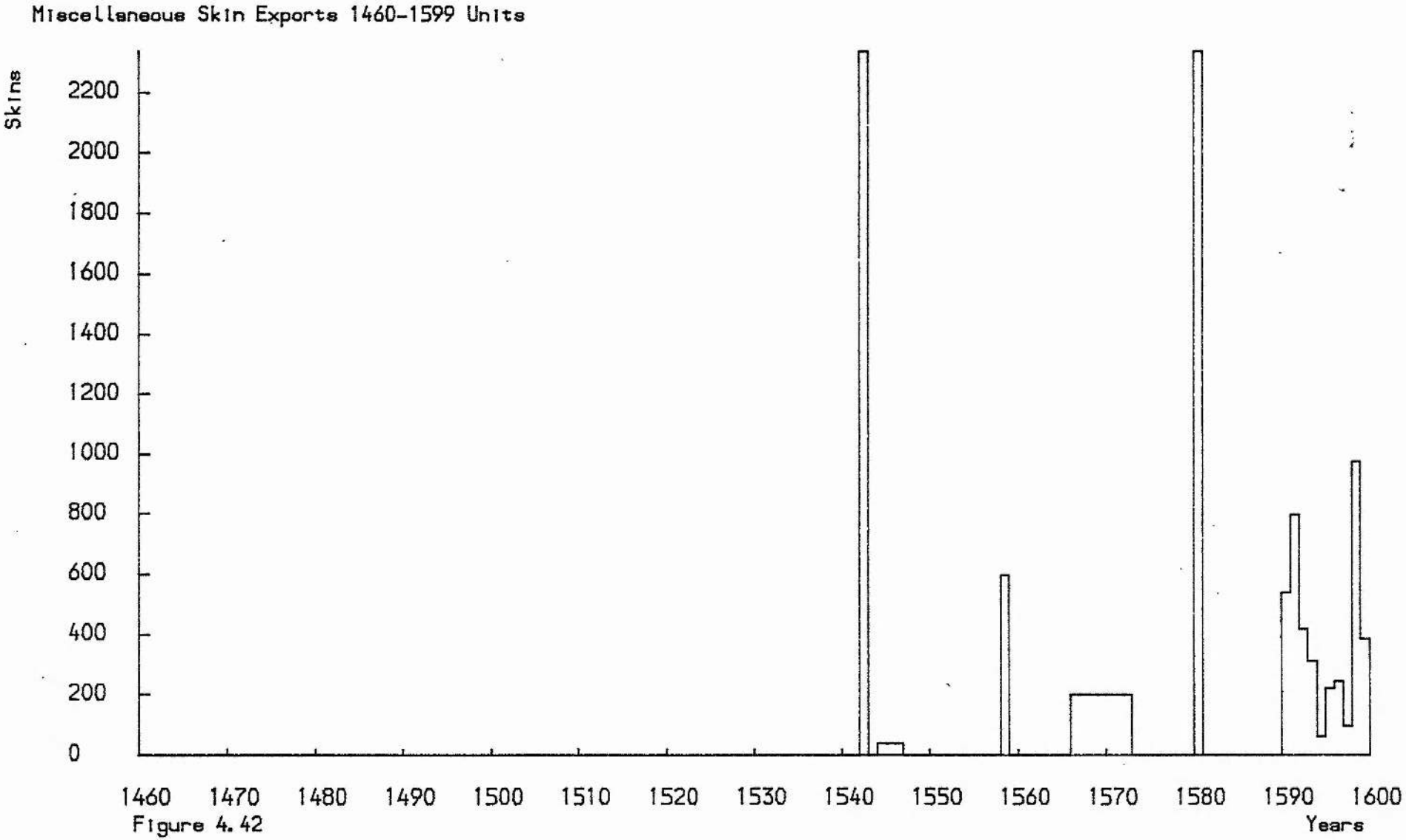

Goat Skin Exports 1460–1599 Units
Decade Mean
1 Perth
2 Edinburgh
3 Dundee
4 Other burghs
Skins
8000
7000
6000
5000
4000
3000
2000
1000
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
Decades

Figure 4.41


Miscellaneous Skin Exports 1460-1599 Units
Skins
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
1600
Years
Figure 4.42

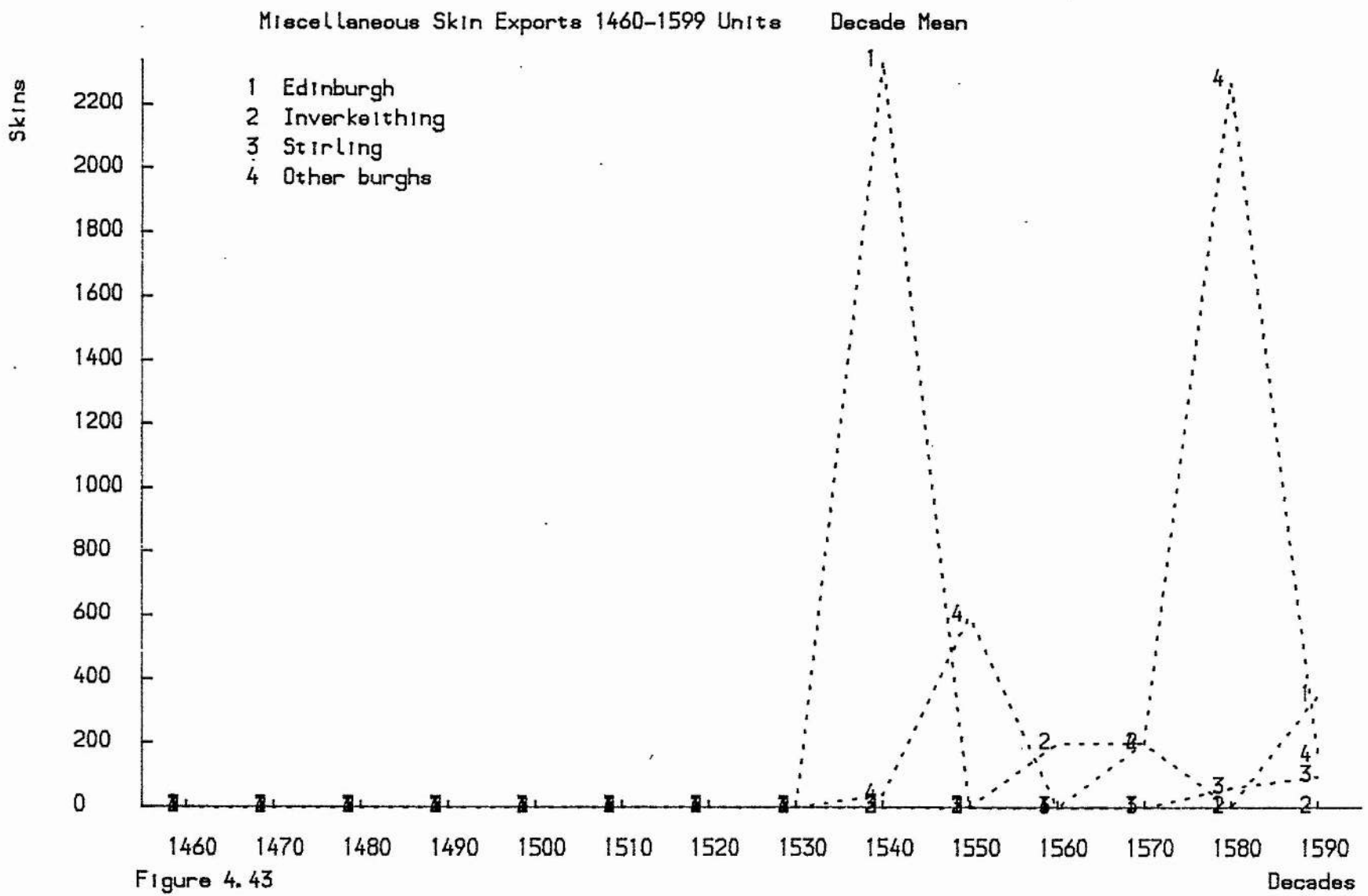
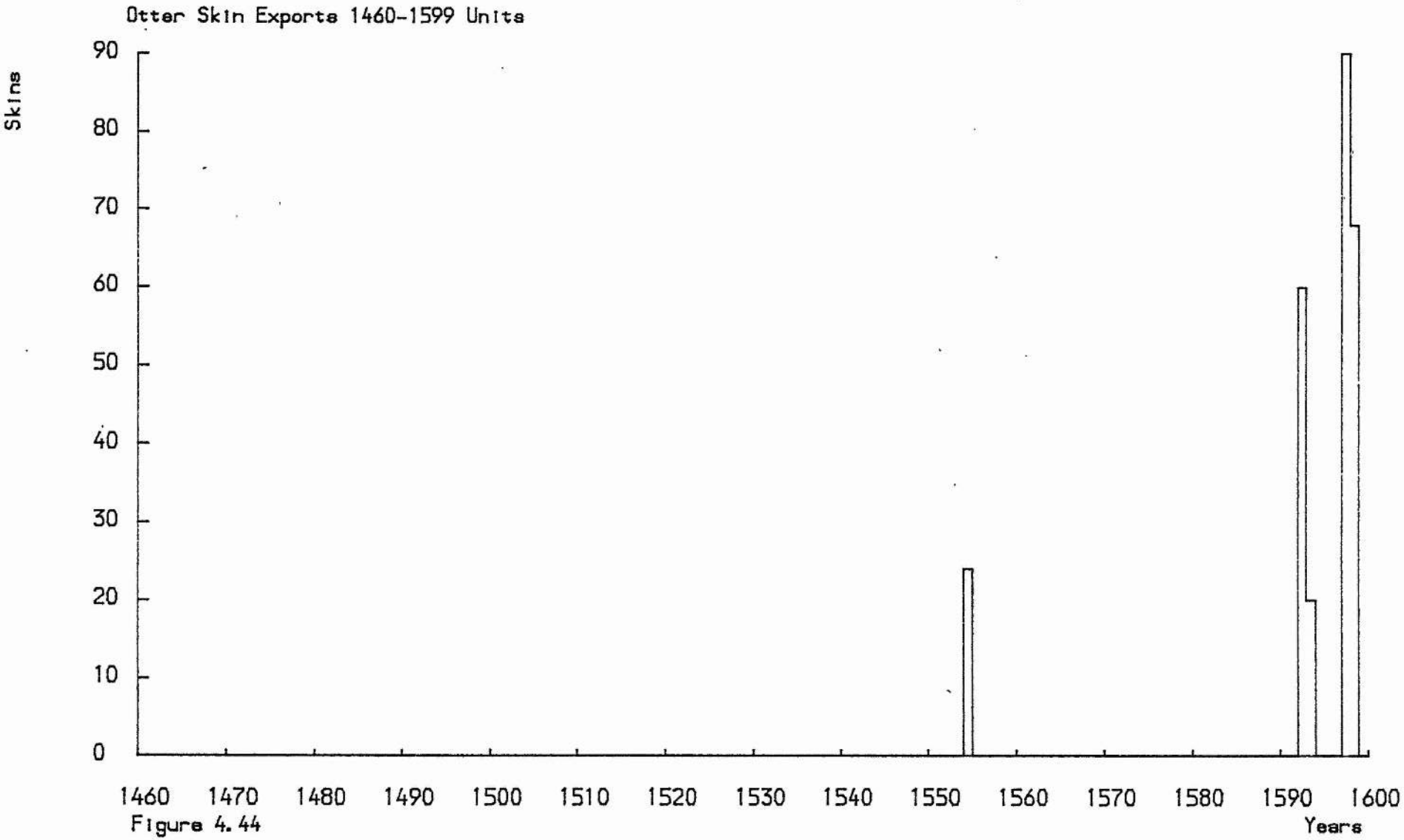

Miscellaneous Skin Exports 1460-1599 Units
Decade Mean
1 Edinburgh
2 Inverkeithing
3 Stirling
4 Other burghs
Skins
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
Decades

Figure 4.43


Otter Skin Exports 1460-1599 Units
Skins
90
80
70
60
50
40
30
20
10
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
1600
Years
Figure 4.44

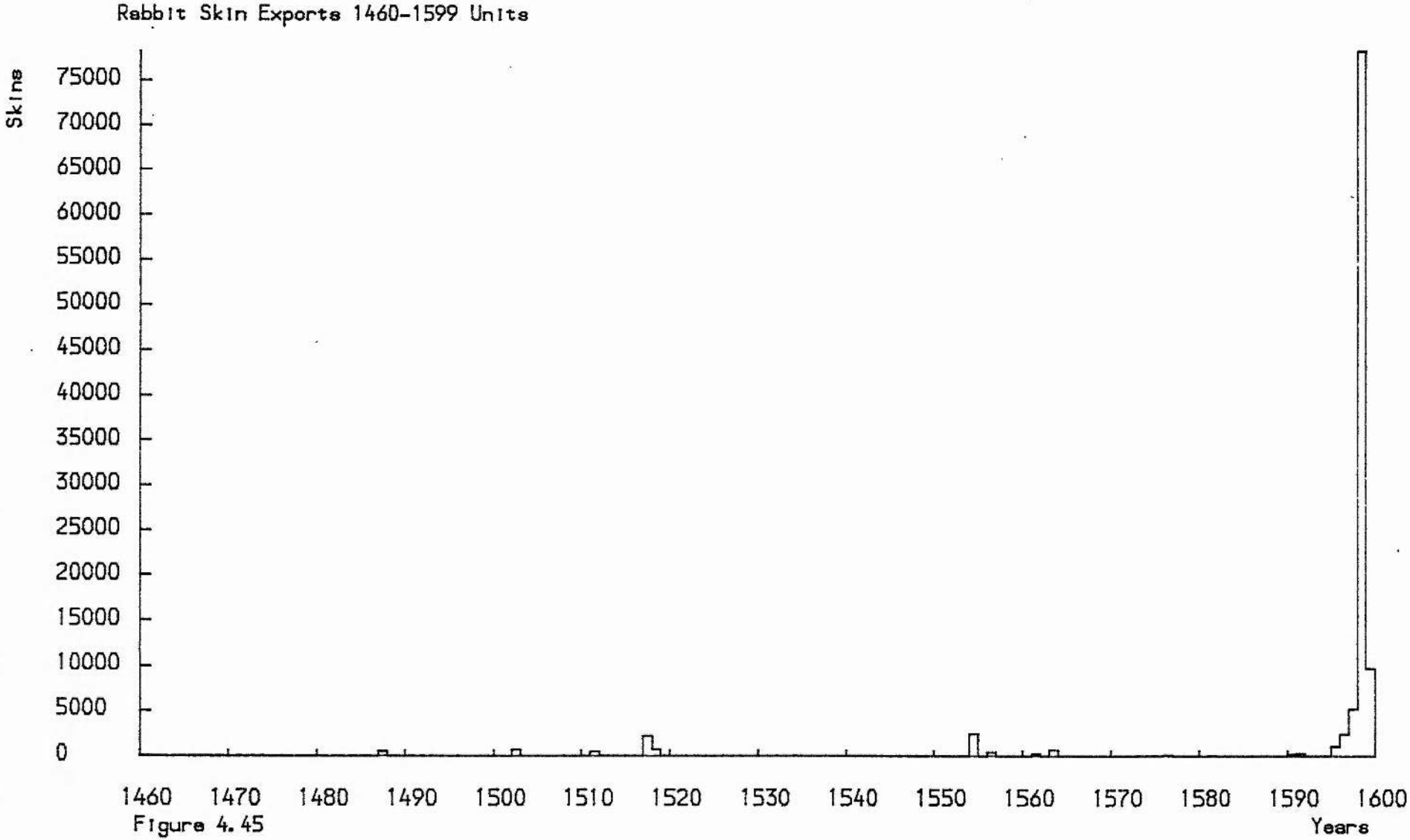

Rabbit Skin Exports 1460-1599 Units
Skins
75000
70000
65000
60000
55000
50000
45000
40000
35000
30000
25000
20000
15000
10000
5000
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
1600
Years

Figure 4.45

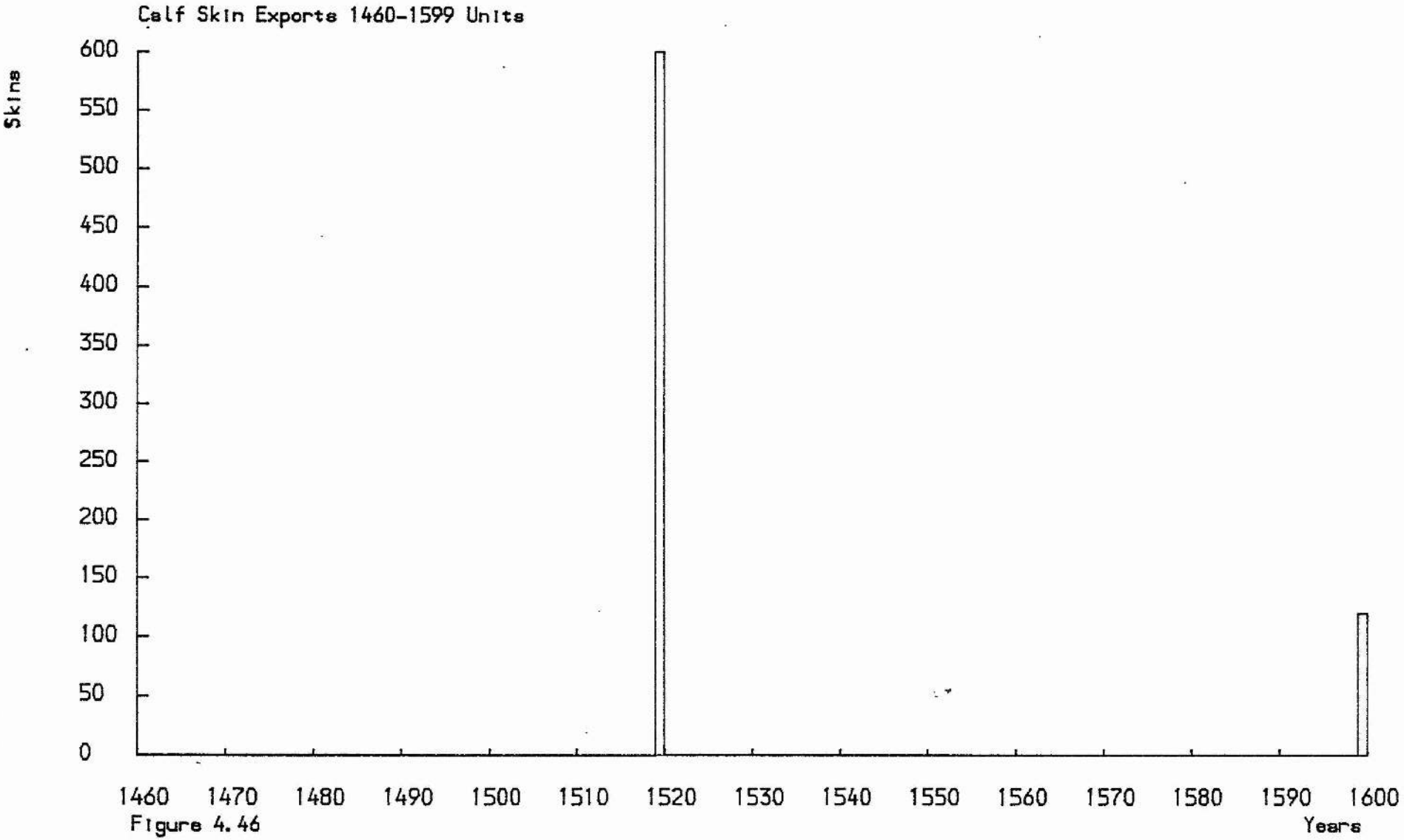

Calf Skin Exports 1460-1599 Units
Skins
600
550
500
450
400
350
300
250
200
150
100
50
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
1600
Years

Figure 4.46

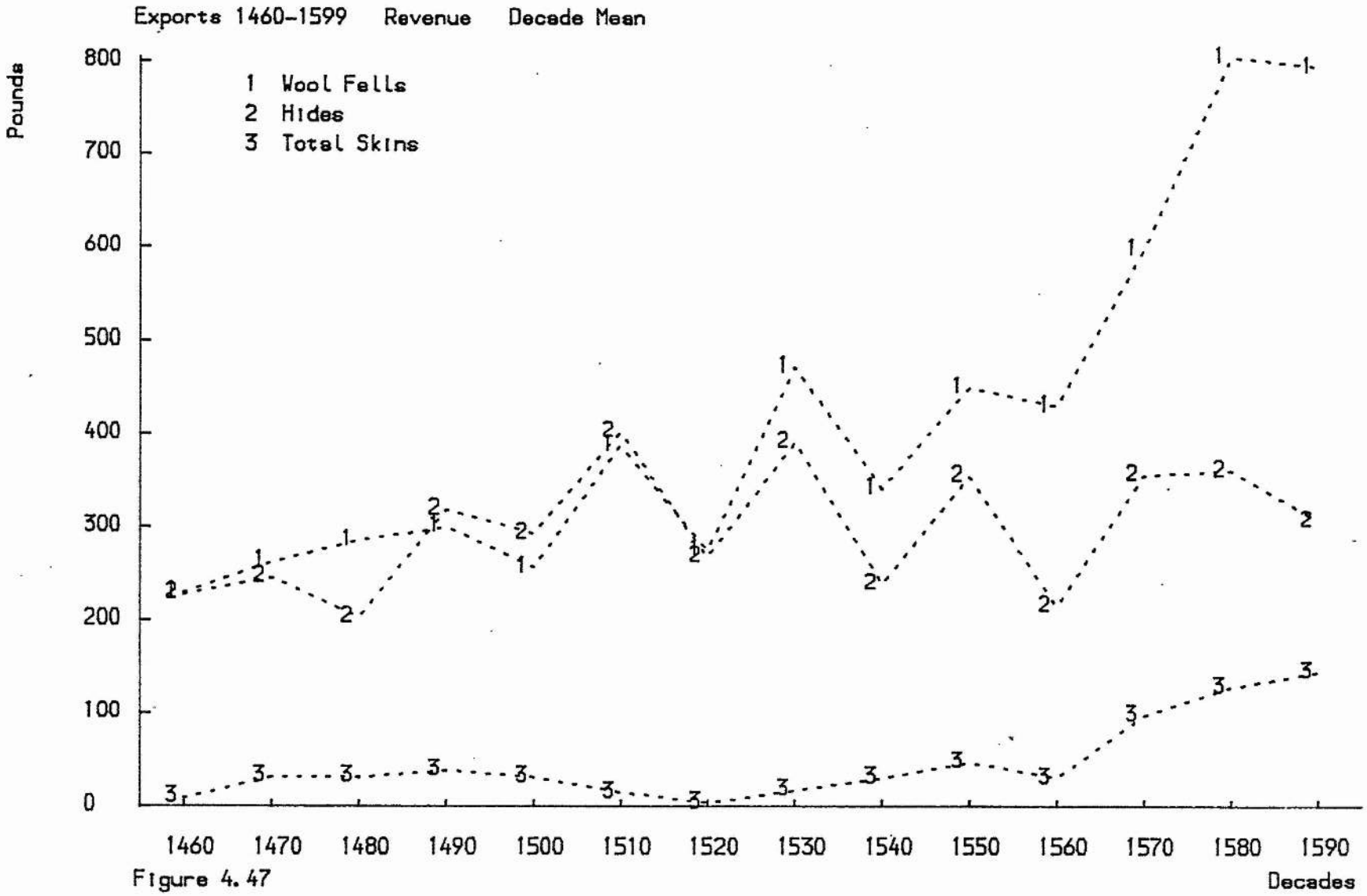

Exports 1460-1599 Revenue Decade Mean
1 Wool Fells
2 Hides
3 Total Skins
Pounds
800
700
600
500
400
300
200
100
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
Decades

Figure 4.47

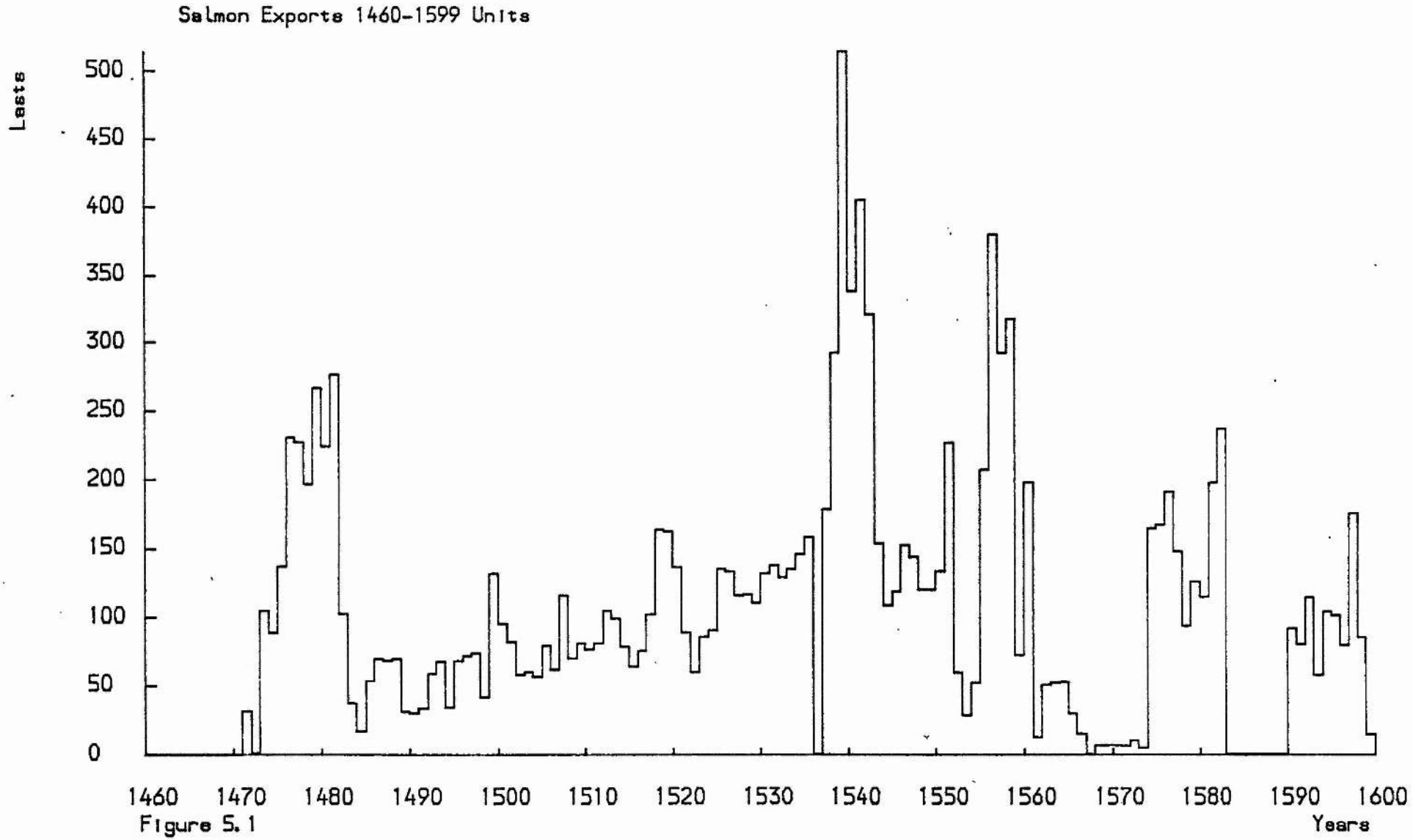
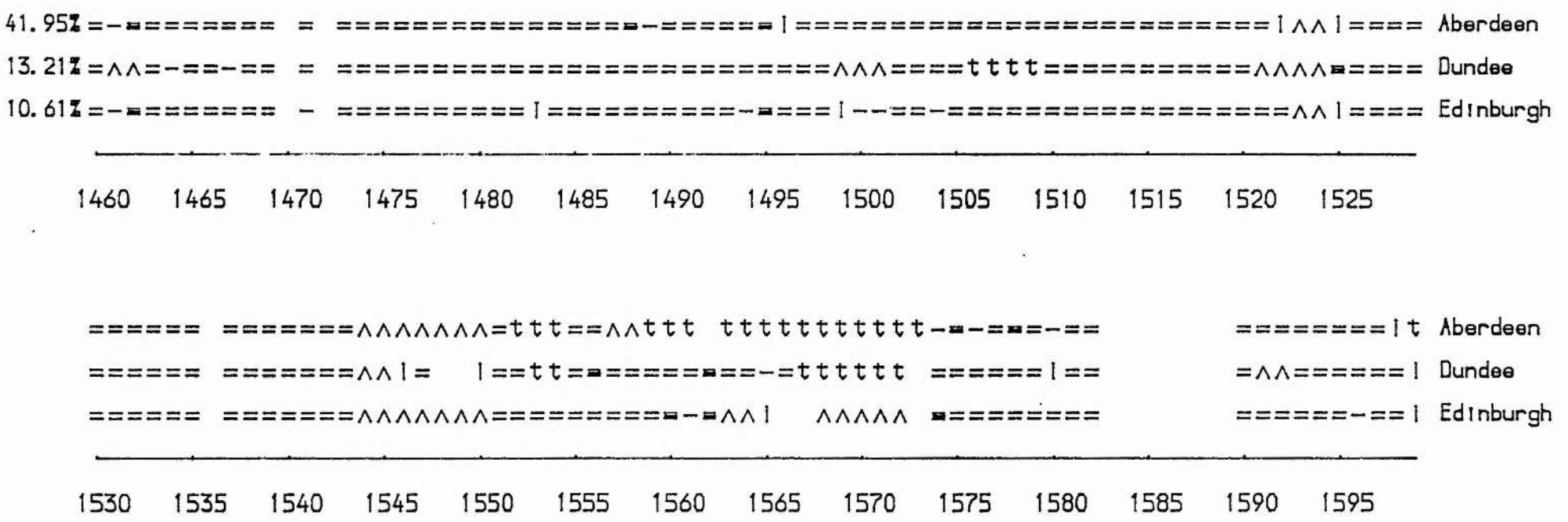
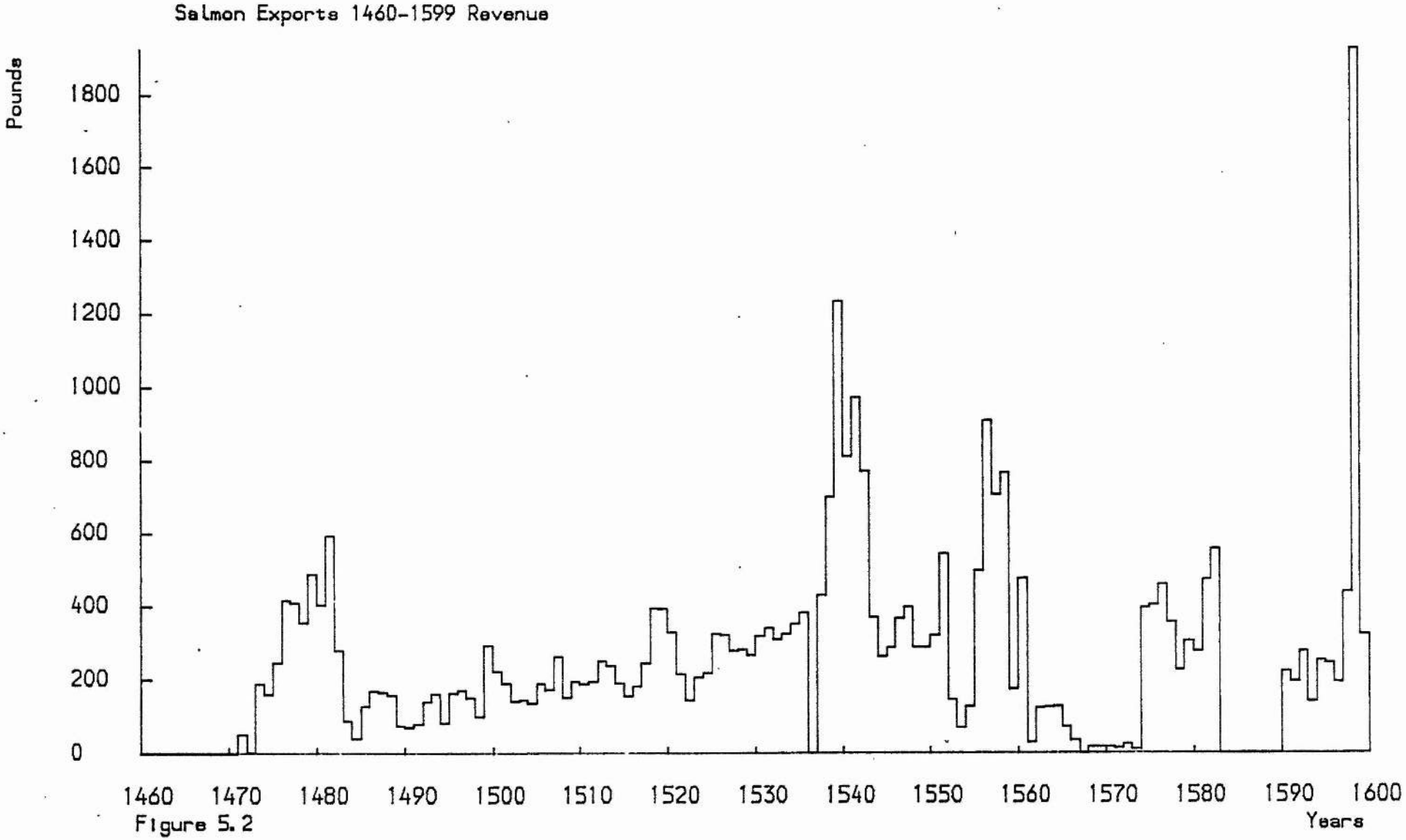

Salmon Exports 1460-1599 Units
Lasts
500
450
400
350
300
250
200
150
100
50
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
1600
Years

Figure 5.1

Figure 5.1.a Classification chart : Top Exporting Burghs of Salmon



<blank> : missing accounts - : short accounts = : regular accounts ▬ : long accounts
^^ : averaged series t : tack accounts ! : irregular accounts


Salmon Exports 1460-1599 Revenue
Pounds
1800
1600
1400
1200
1000
800
600
400
200
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
1600
Years
Figure 5.2

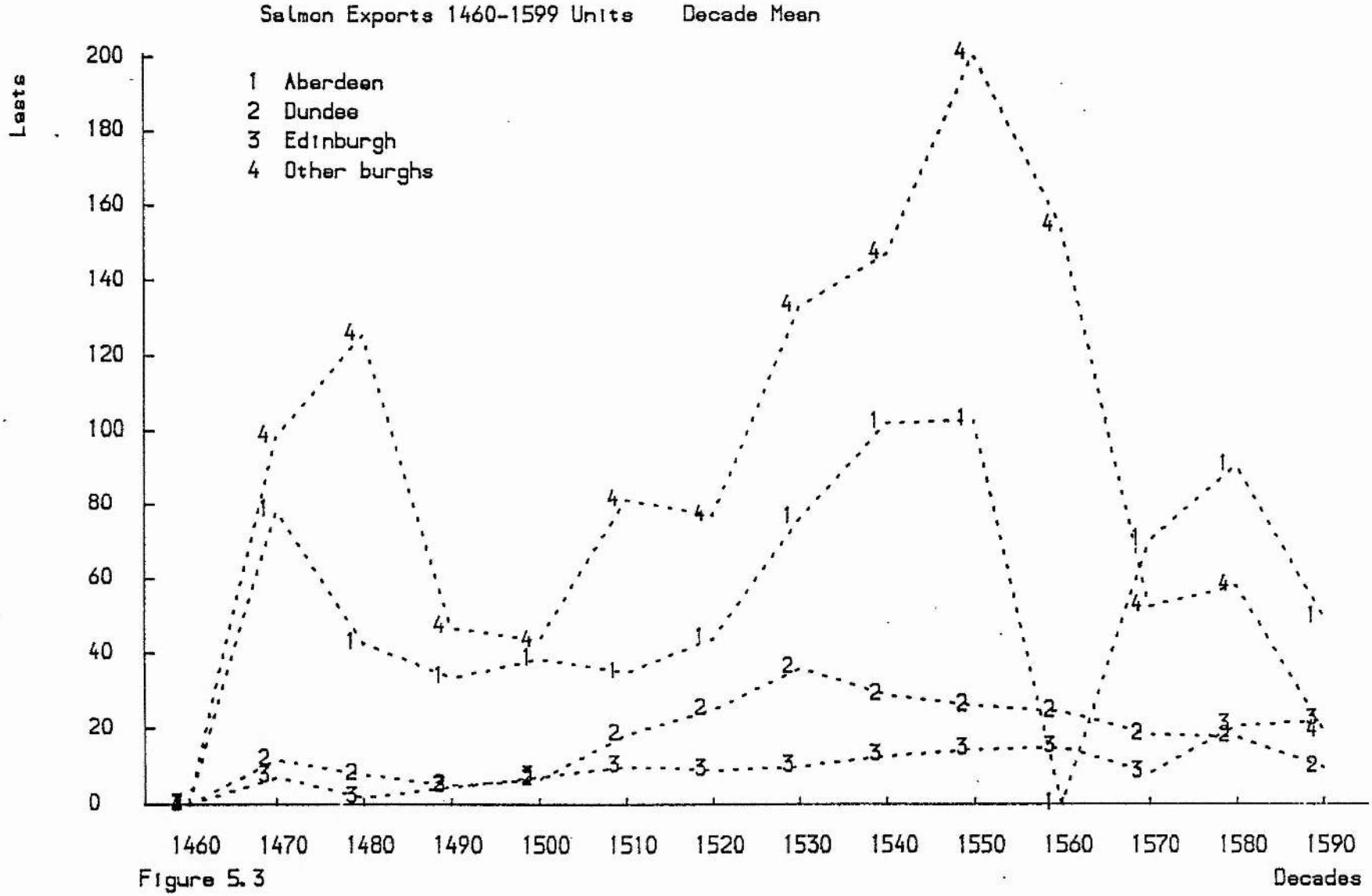

Salmon Exports 1460-1599 Units Decade Mean
Lasts
1 Aberdeen
2 Dundee
3 Edinburgh
4 Other burghs
200
180
160
140
120
100
80
60
40
20
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
Decades

Figure 5.3

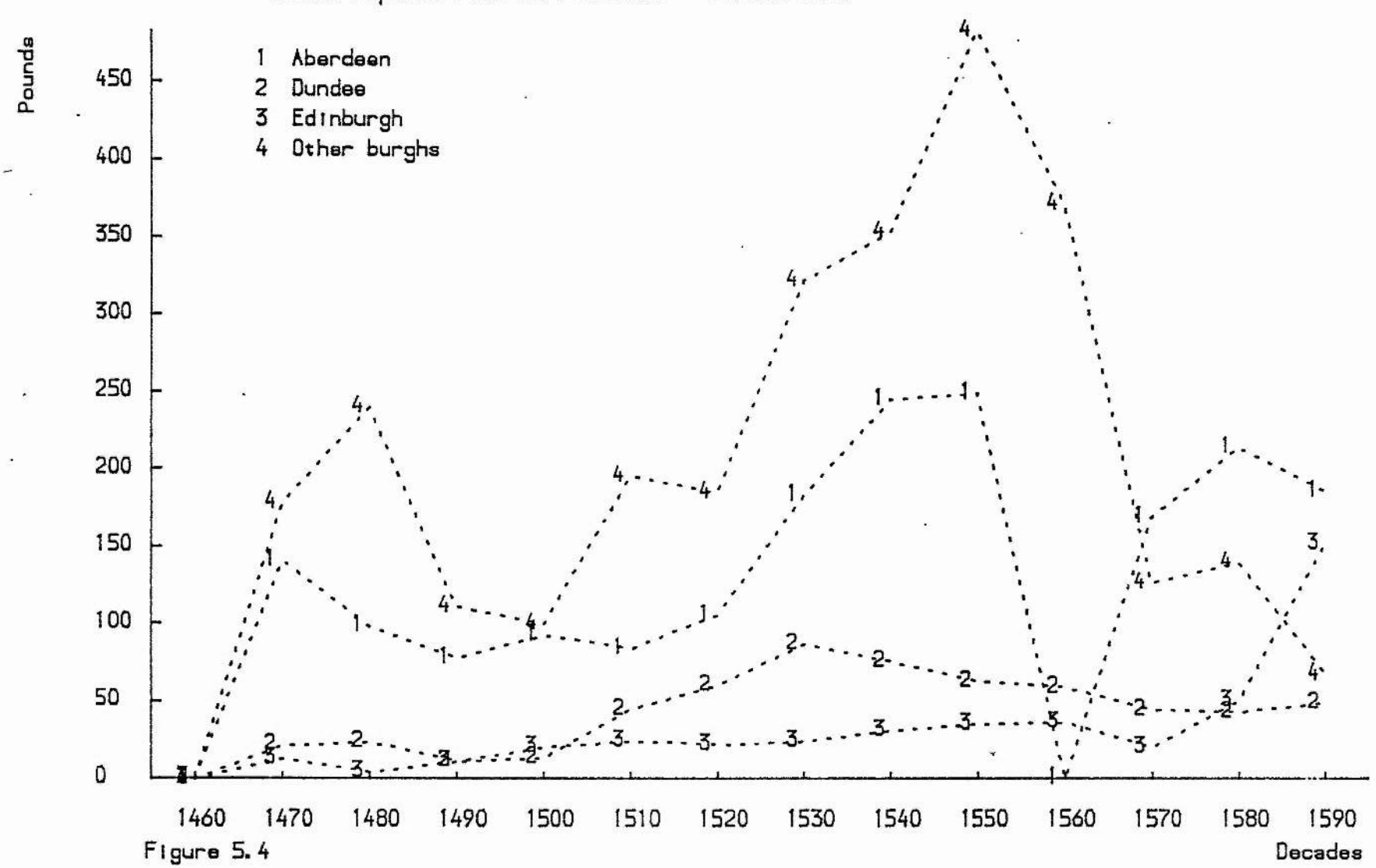

Salmon Exports 1460-1599 Revenue Decade Mean
Pounds
1 Aberdeen
2 Dundee
3 Edinburgh
4 Other burghs
450
400
350
300
250
200
150
100
50
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
Decades

Figure 5.4

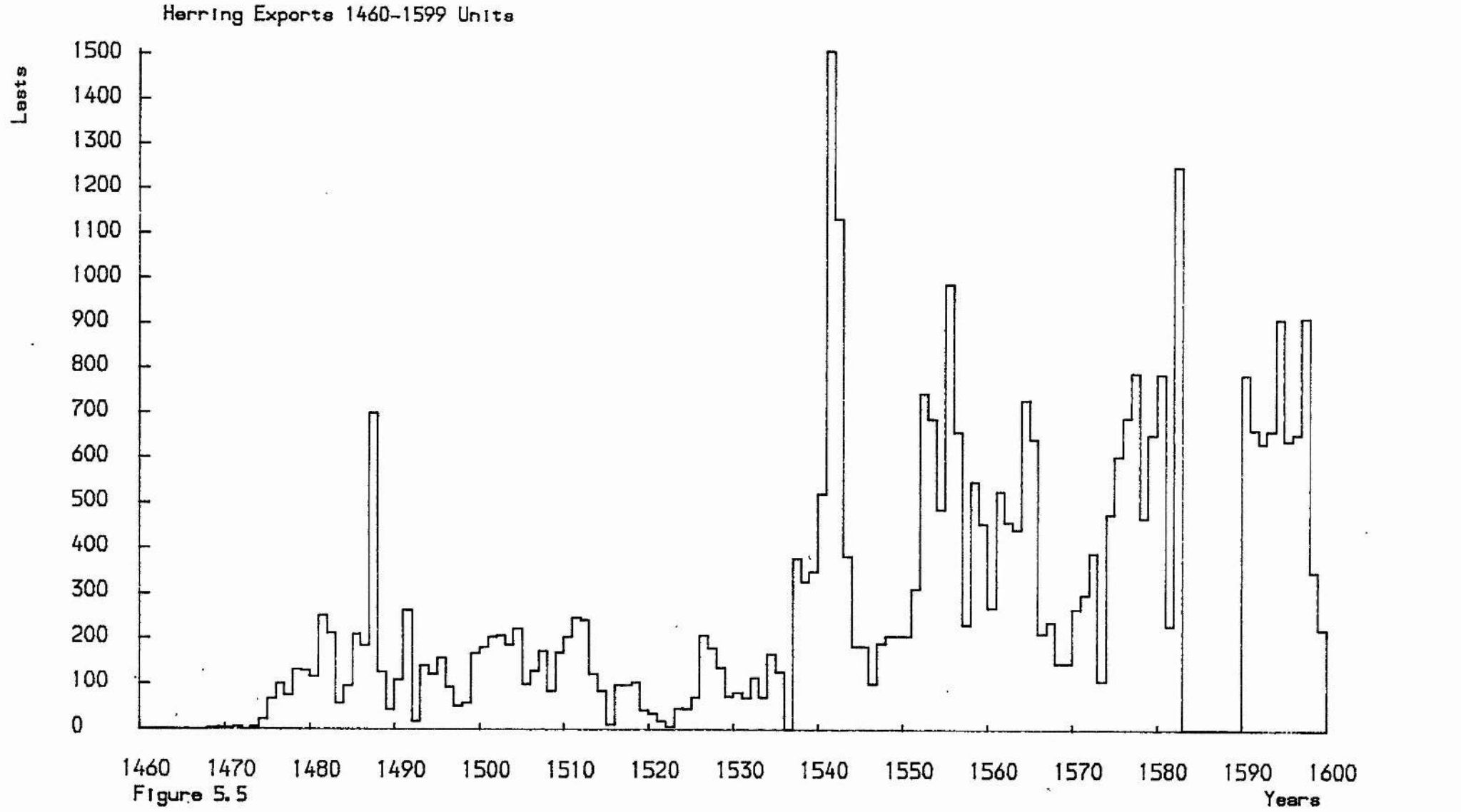
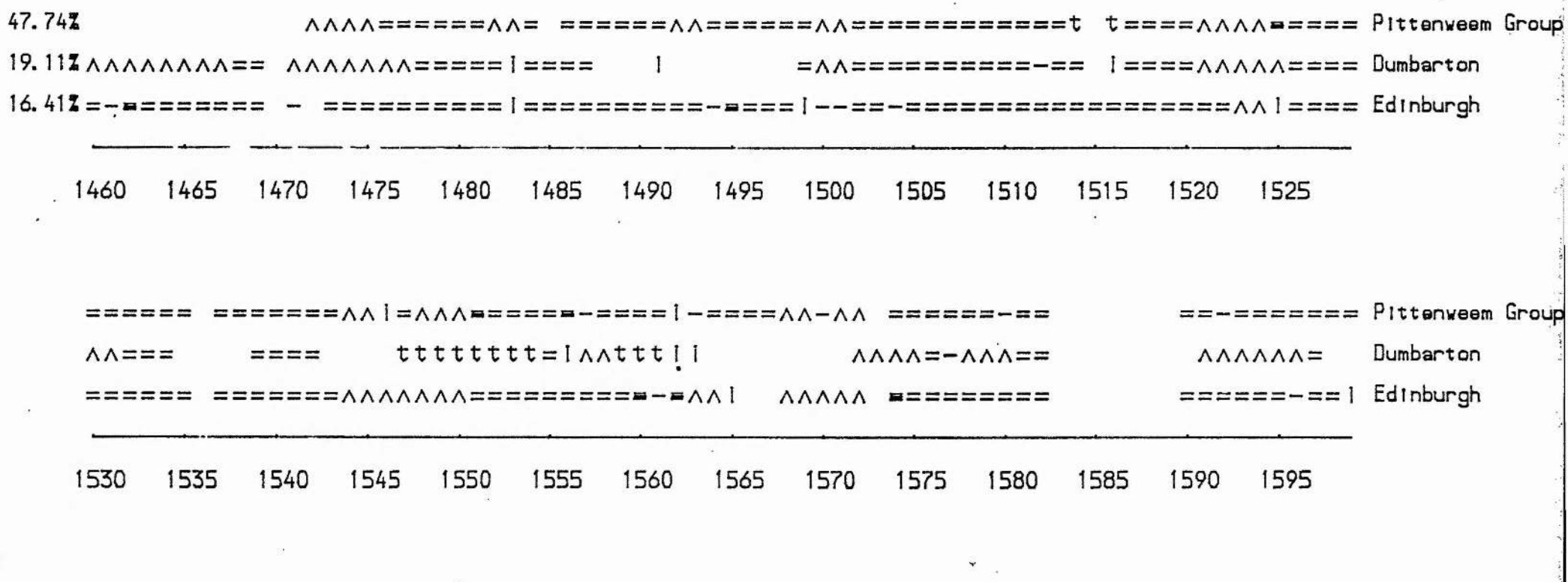

Herring Exports 1460-1599 Units
Lasts
1500
1400
1300
1200
1100
1000
900
800
700
600
500
400
300
200
100
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
1600
Years
Figure 5.5

Figure 5.5.a Classification chart : Top Exporting Burghs of Herring



<blank> : missing accounts - : short accounts = : regular accounts ▪ : long accounts
^^ : averaged series t : tack accounts I : irregular accounts

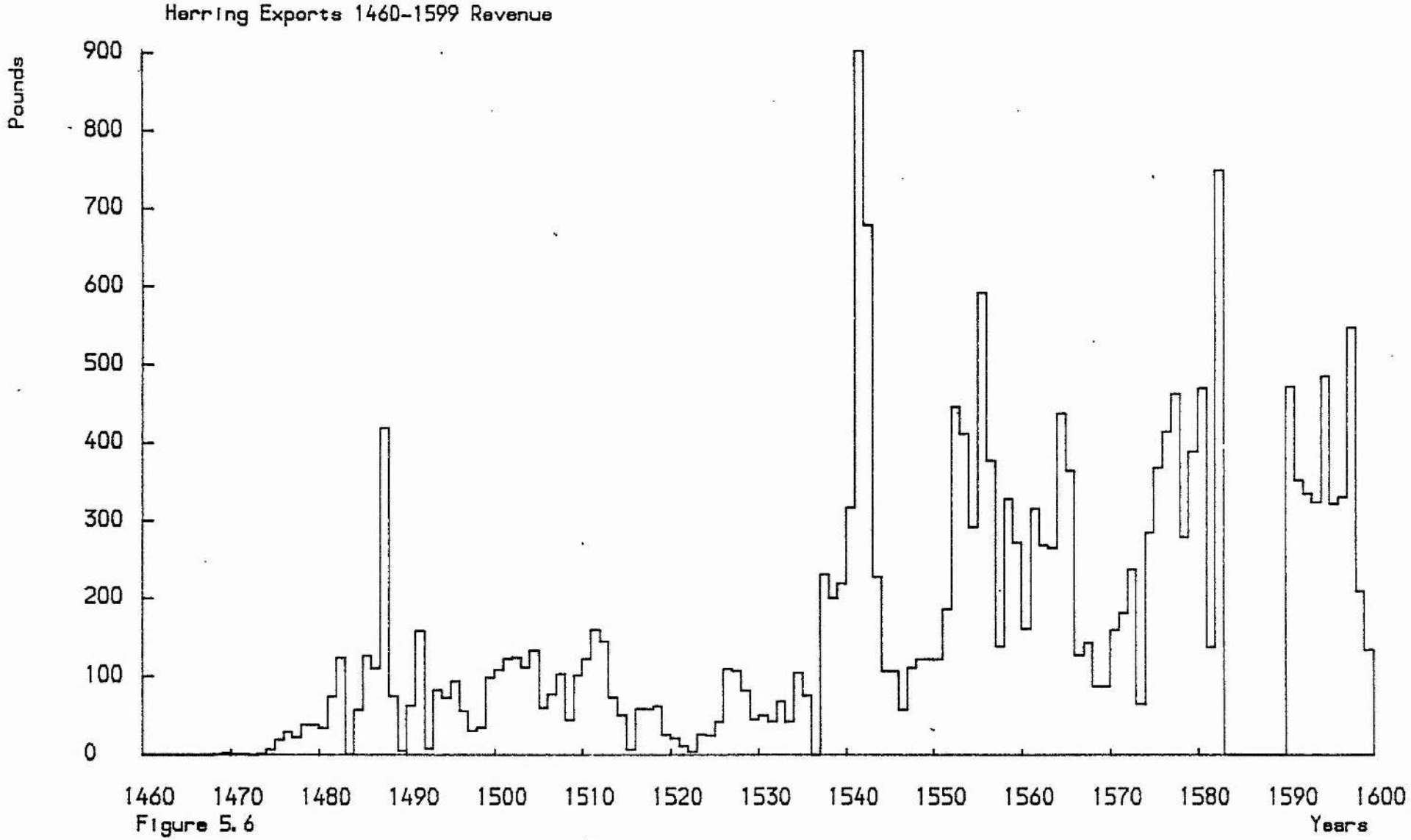

Herring Exports 1460-1599 Revenue
Pounds
900
800
700
600
500
400
300
200
100
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
1600
Years

Figure 5.6

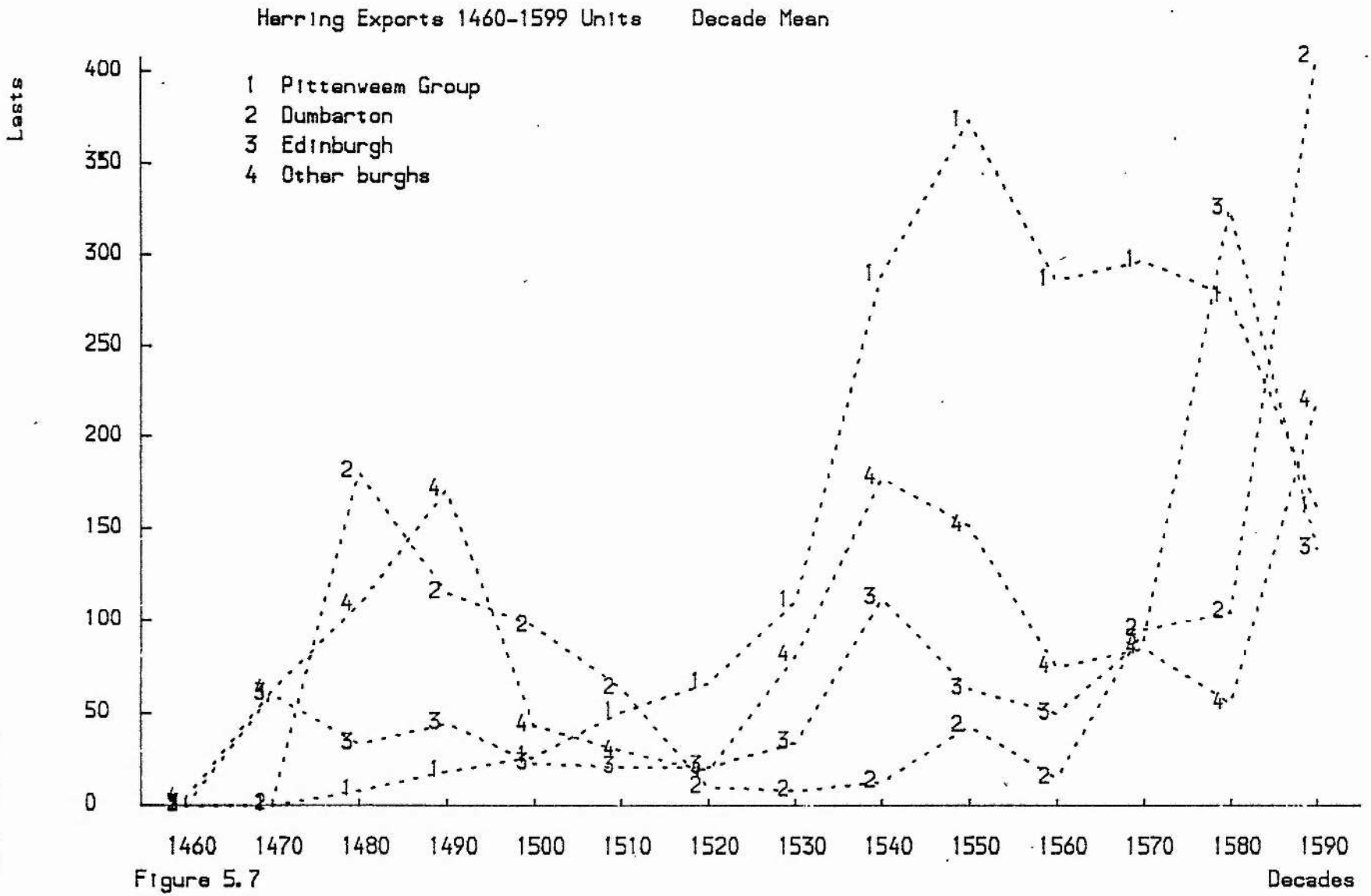

Herring Exports 1460-1599 Units Decade Mean
1 Pittenweem Group
2 Dumbarton
3 Edinburgh
4 Other burghs
Lasts
400
350
300
250
200
150
100
50
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
Decades

Figure 5.7

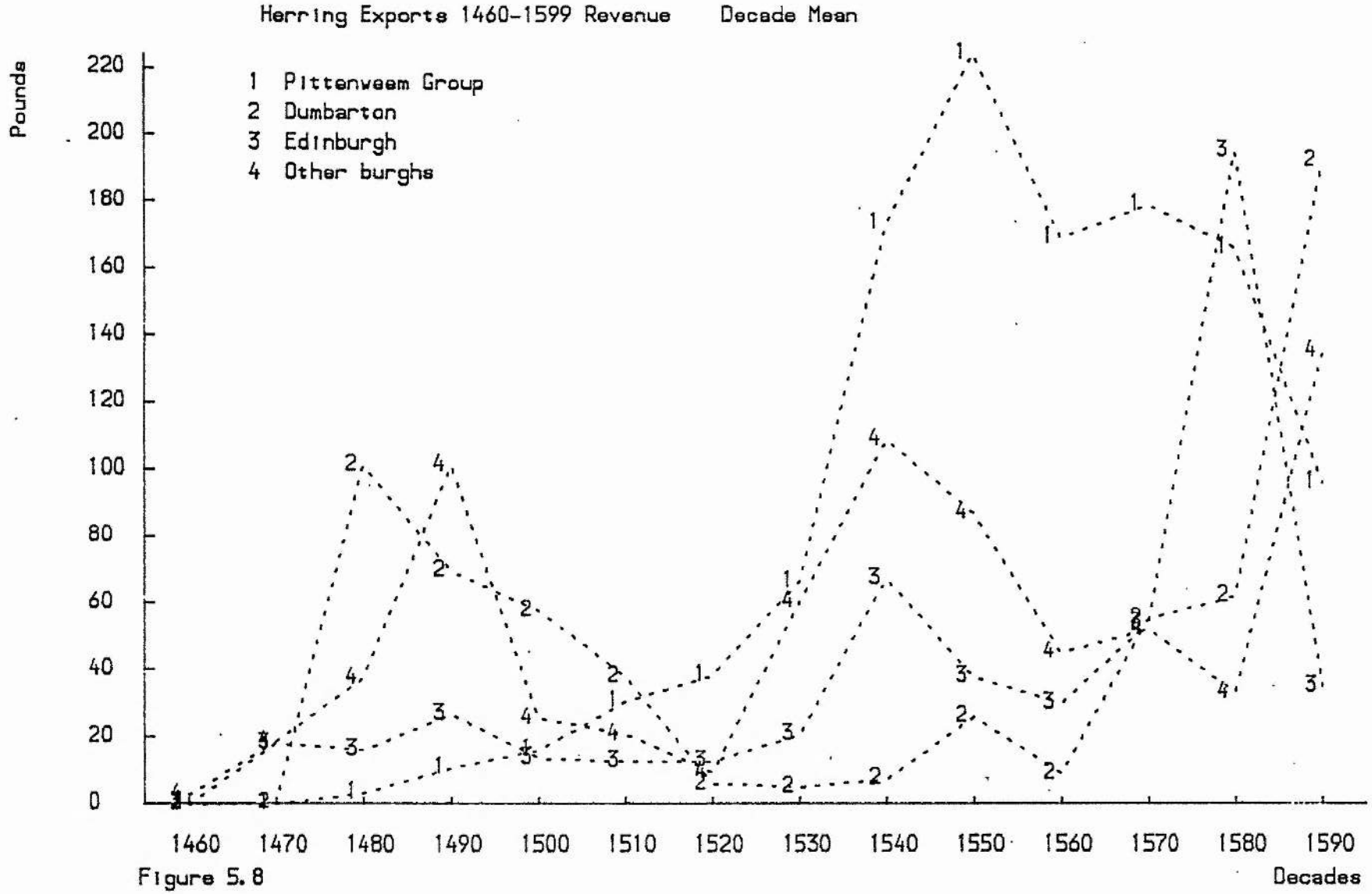

Herring Exports 1460-1599 Revenue Decade Mean
Pounds
1 Pittenweem Group
2 Dumbarton
3 Edinburgh
4 Other burghs
220
200
180
160
140
120
100
80
60
40
20
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
Decades

Figure 5.8

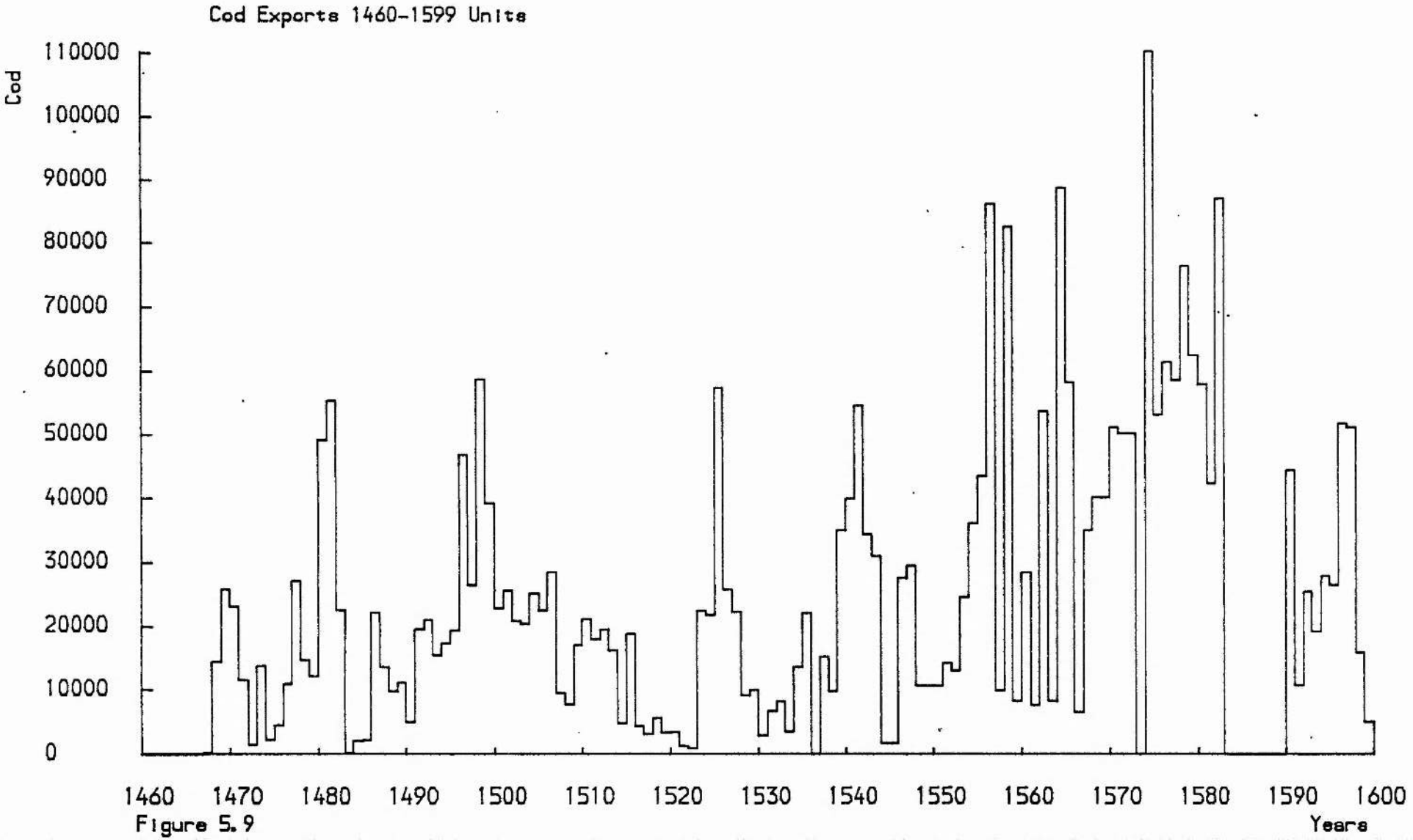
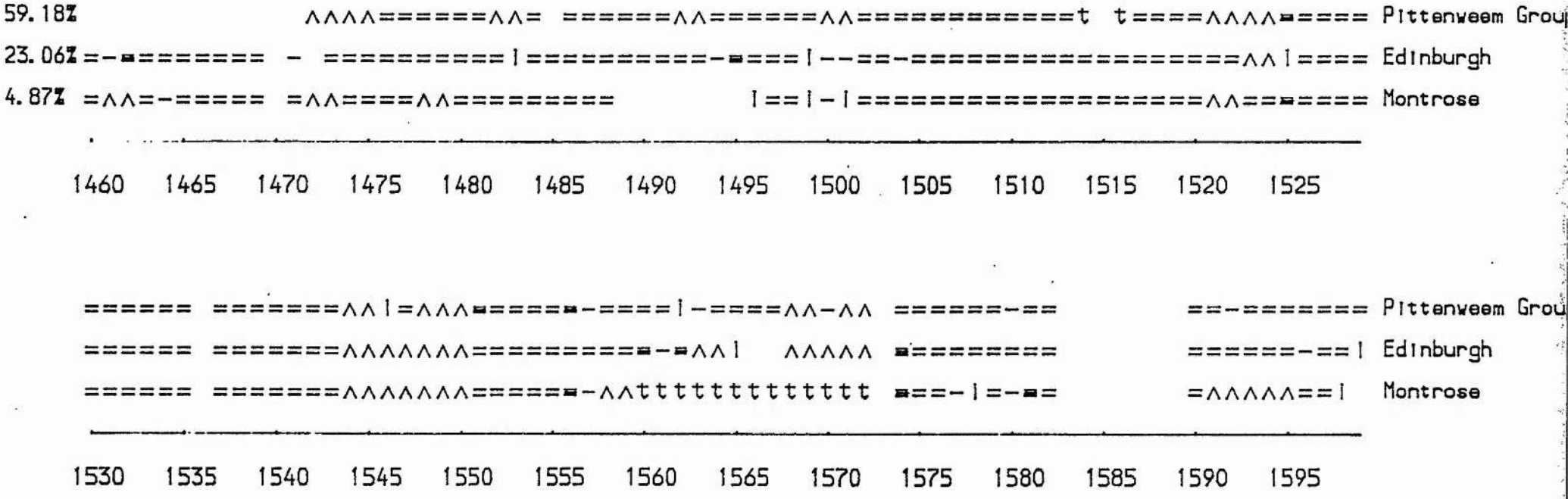

Cod Exports 1460-1599 Units
Cod
110000
100000
90000
80000
70000
60000
50000
40000
30000
20000
10000
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
1600
Years

Figure 5.9

Figure 5.9.a Classification chart : Top Exporting Burghs of Cod



<blank> : missing accounts - : short accounts = : regular accounts ▪ : long accounts
^^ : averaged series t : tack accounts ! : irregular accounts

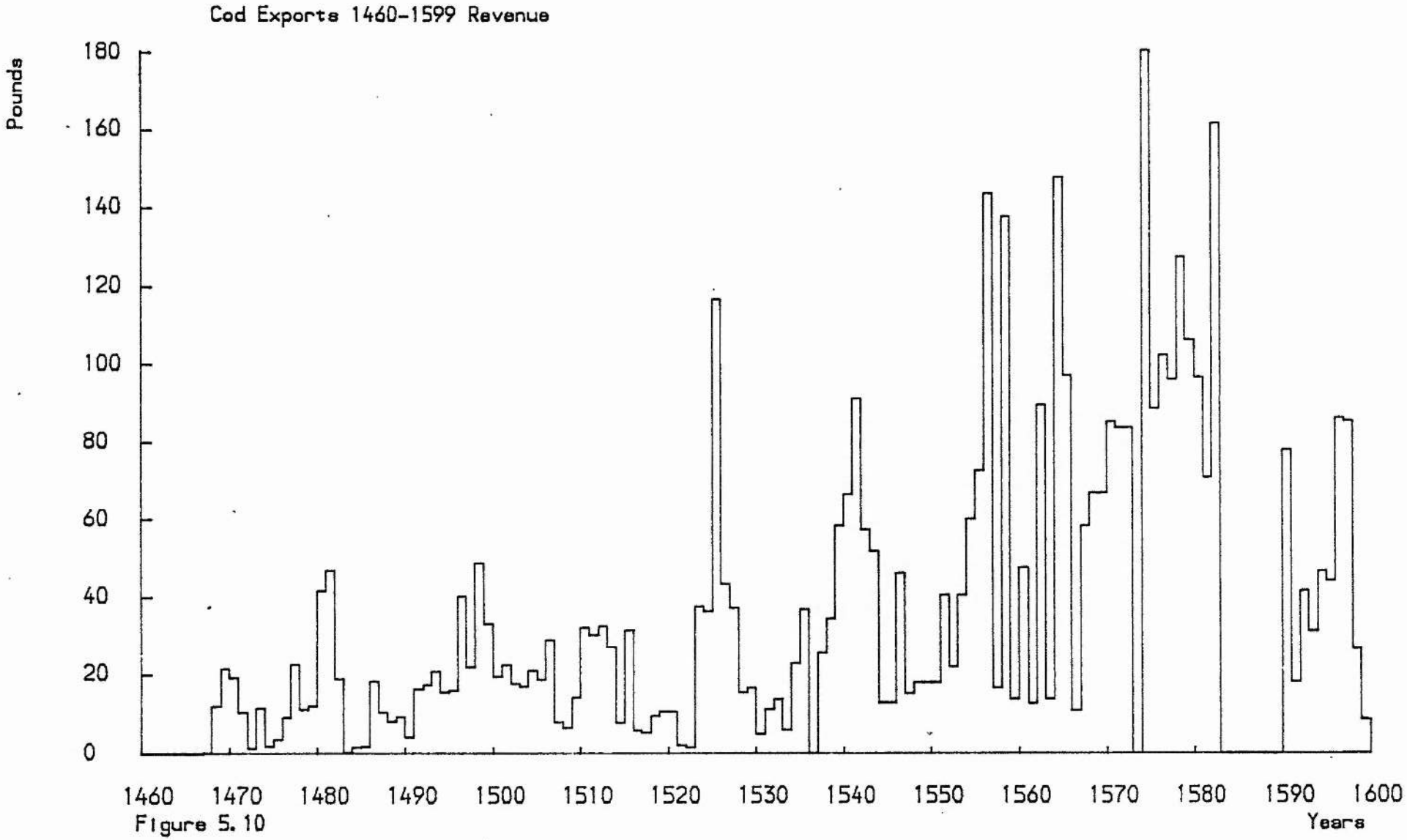

Cod Exports 1460-1599 Revenue
Pounds
180
160
140
120
100
80
60
40
20
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
1600
Years

Figure 5.10

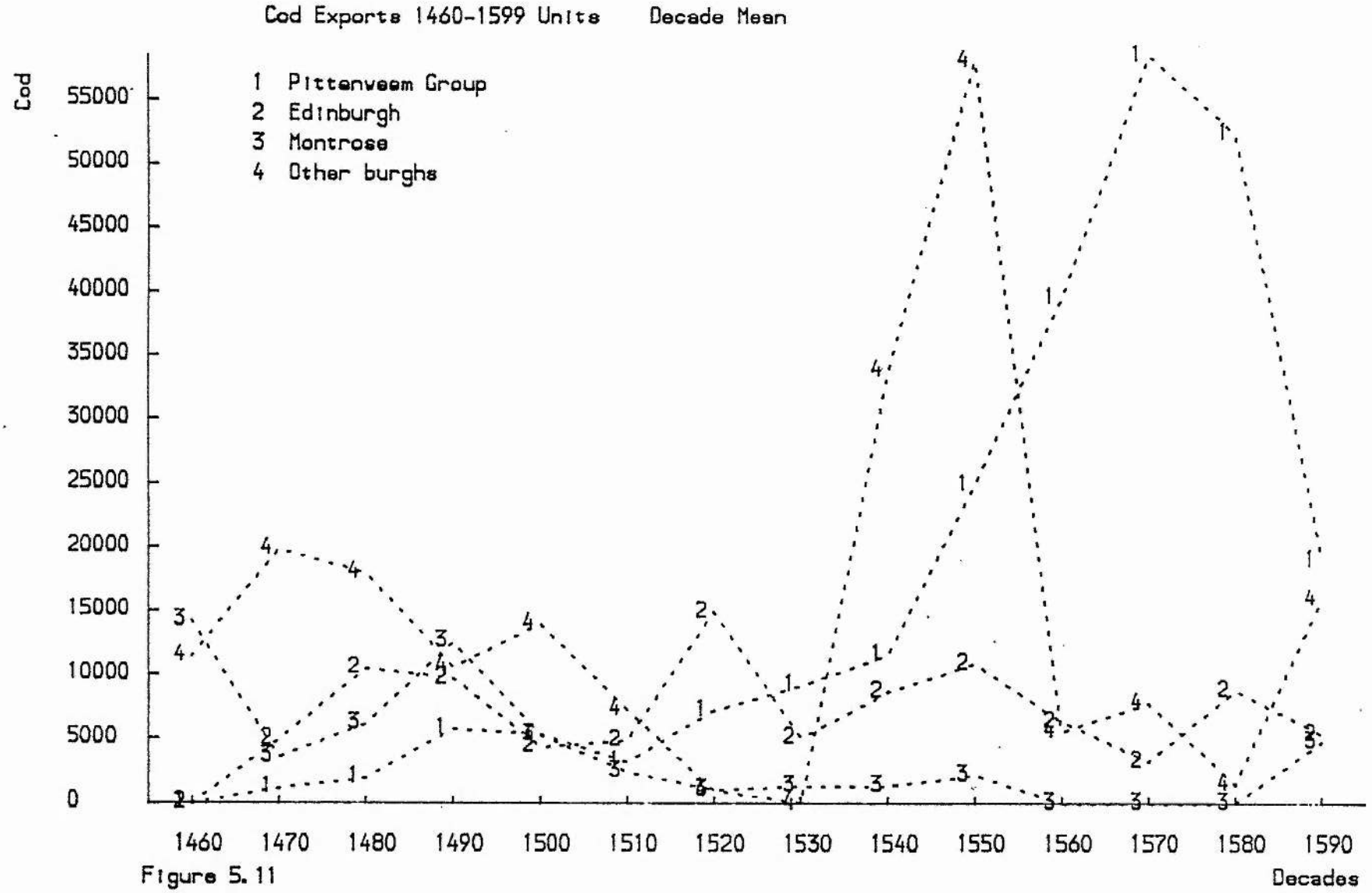

Cod Exports 1460-1599 Units Decade Mean
1 Pittenweem Group
2 Edinburgh
3 Montrose
4 Other burghs
Cod
55000
50000
45000
40000
35000
30000
25000
20000
15000
10000
5000
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
Decades

Figure 5.11

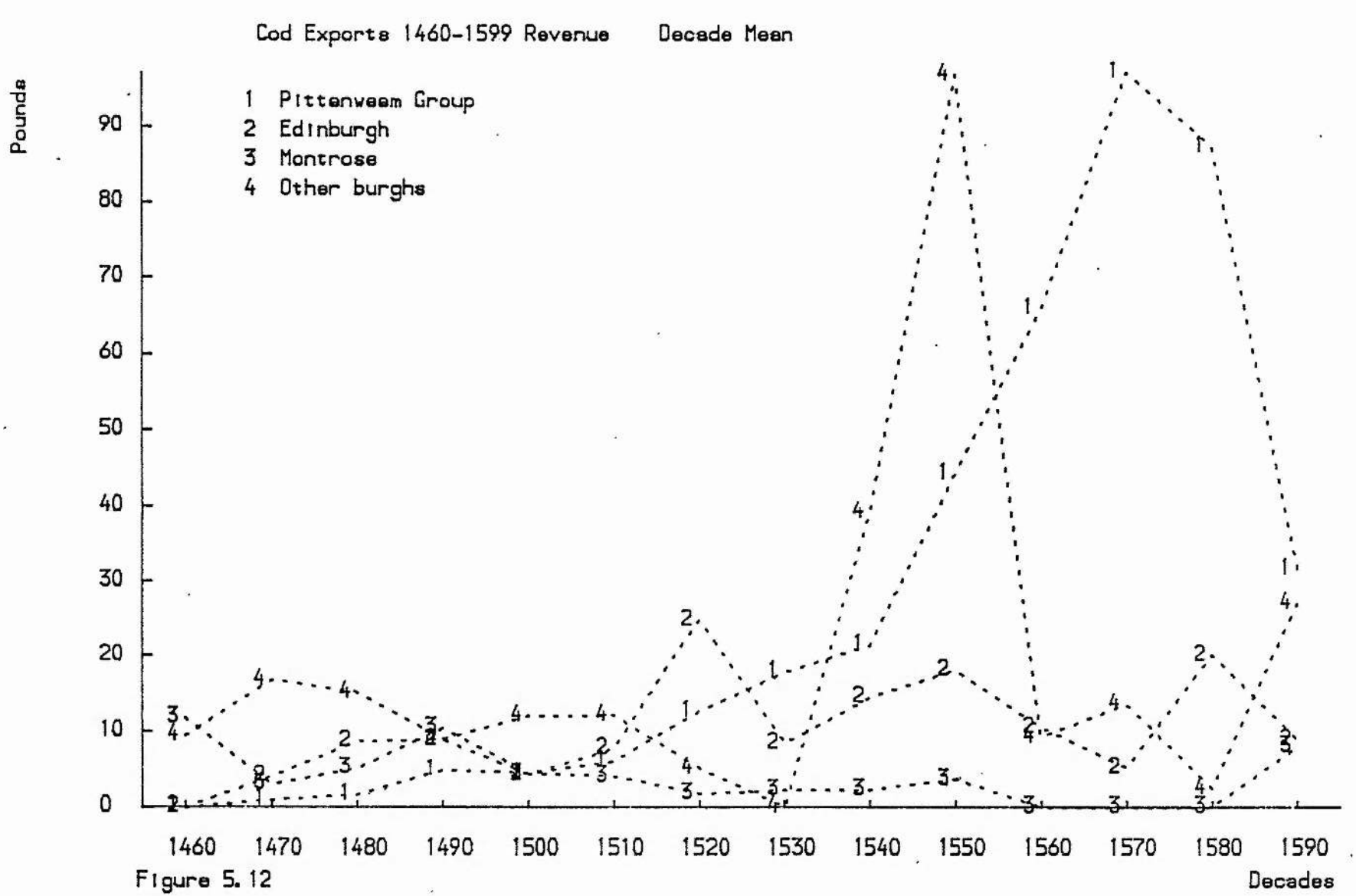

Cod Exports 1460-1599 Revenue Decade Mean
Pounds
1 Pittenweem Group
2 Edinburgh
3 Montrose
4 Other burghs
0
10
20
30
40
50
60
70
80
90
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
Decades

Figure 5.12

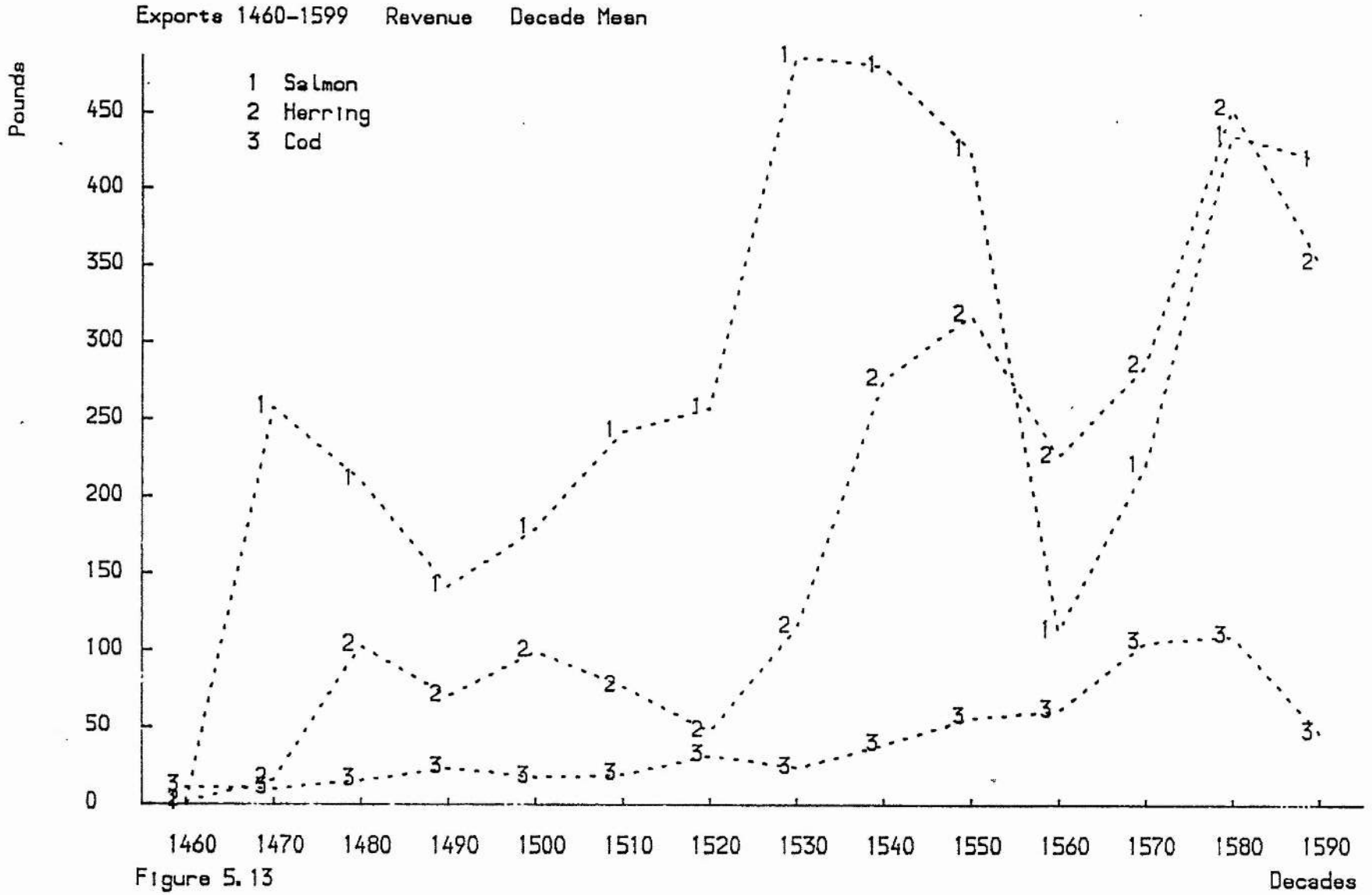

Exports 1460-1599 Revenue Decade Mean
Pounds
1 Salmon
2 Herring
3 Cod
450
400
350
300
250
200
150
100
50
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
Decades

Figure 5.13

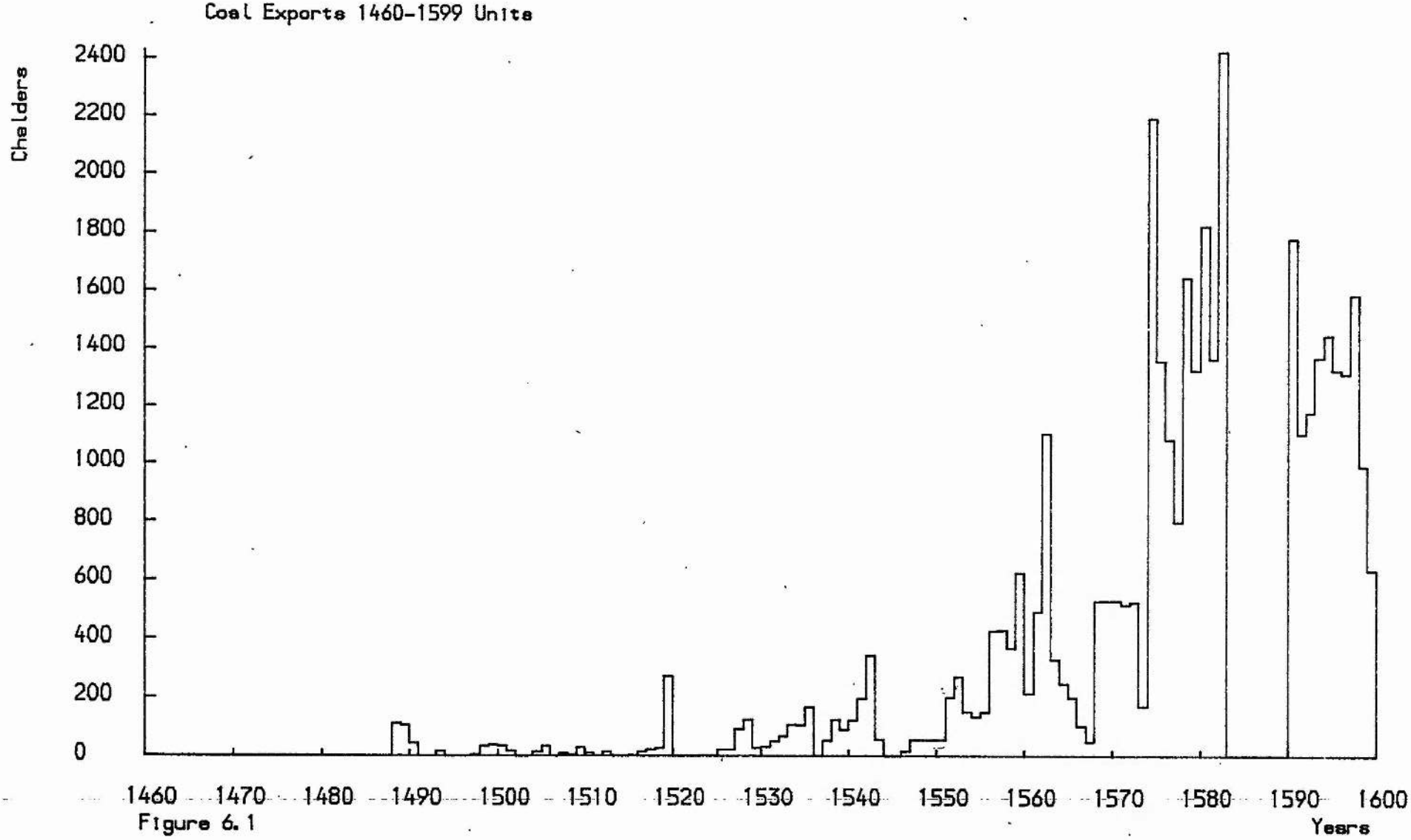
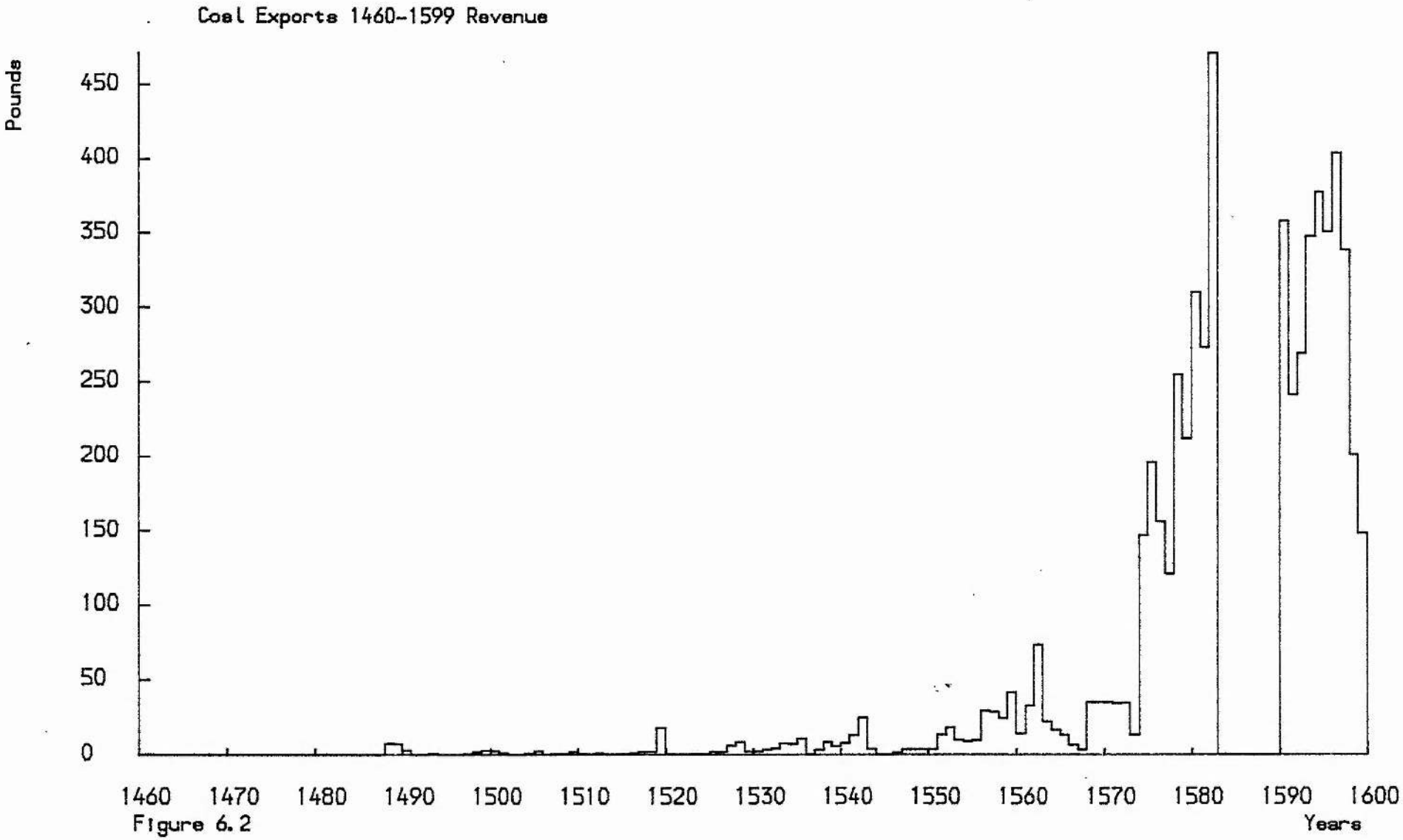

Coal Exports 1460-1599 Units
Chalders
2400
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
1600
Years

Figure 6.1

Figure 6.1.a Classification chart : Top Exporting Burghs of Coal

<blank> : missing accounts - : short accounts = : regular accounts ▪ : long accounts
^^ : averaged series t : tack accounts I : irregular accounts


Coal Exports 1460-1599 Revenue
Pounds
450
400
350
300
250
200
150
100
50
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
1600
Years
Figure 6.2

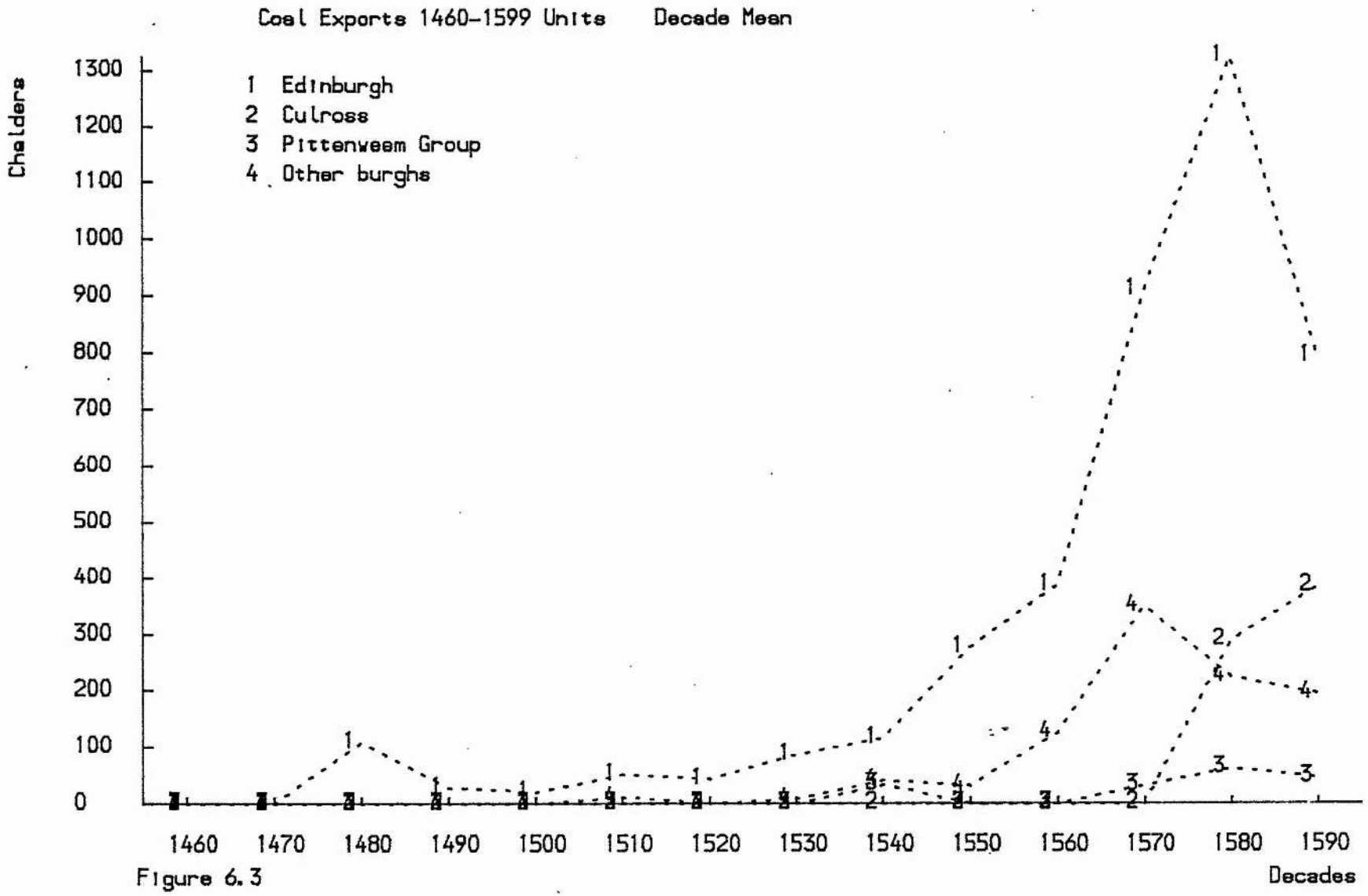

Coal Exports 1460-1599 Units Decade Mean
1 Edinburgh
2 Culross
3 Pittenweem Group
4 Other burghs
Chalders
1300
1200
1100
1000
900
800
700
600
500
400
300
200
100
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
Decades

Figure 6.3

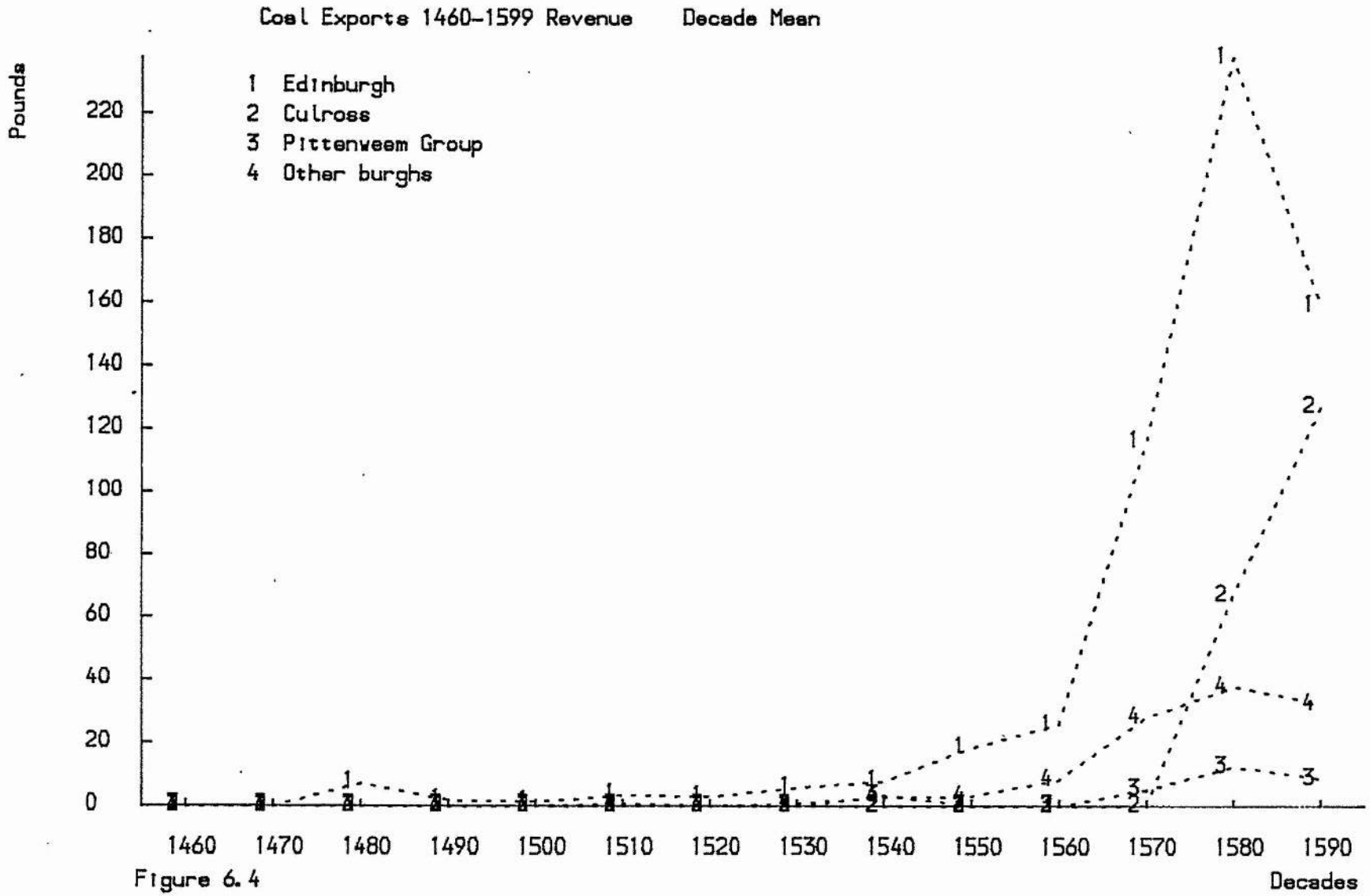

Coal Exports 1460–1599 Revenue Decade Mean
1 Edinburgh
2 Culross
3 Pittenweem Group
4 Other burghs
Pounds
220
200
180
160
140
120
100
80
60
40
20
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
Decades

Figure 6.4

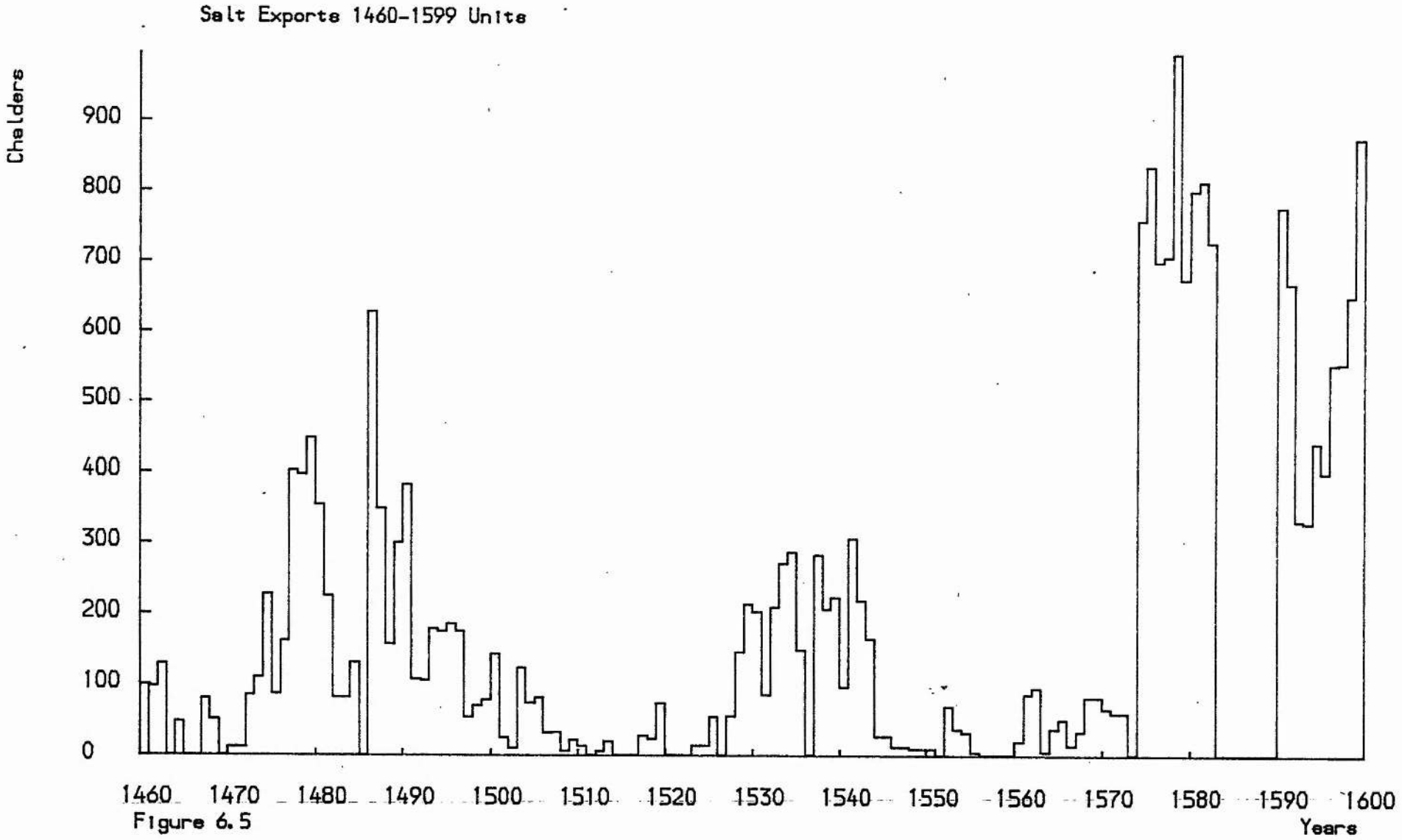
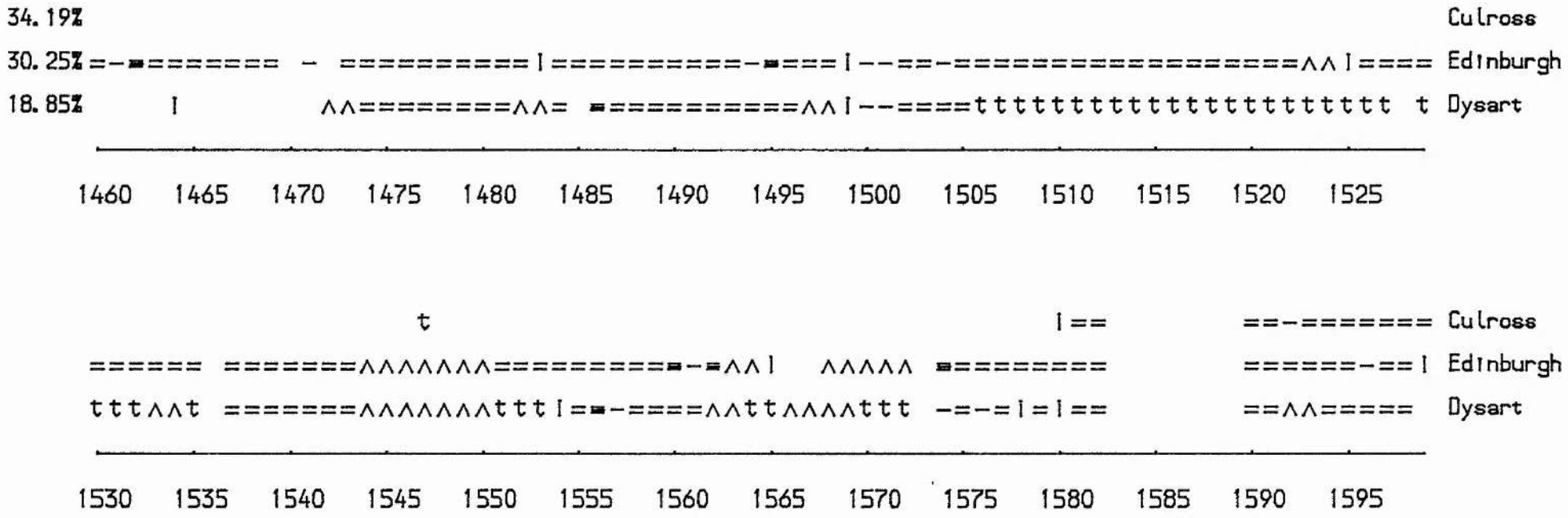
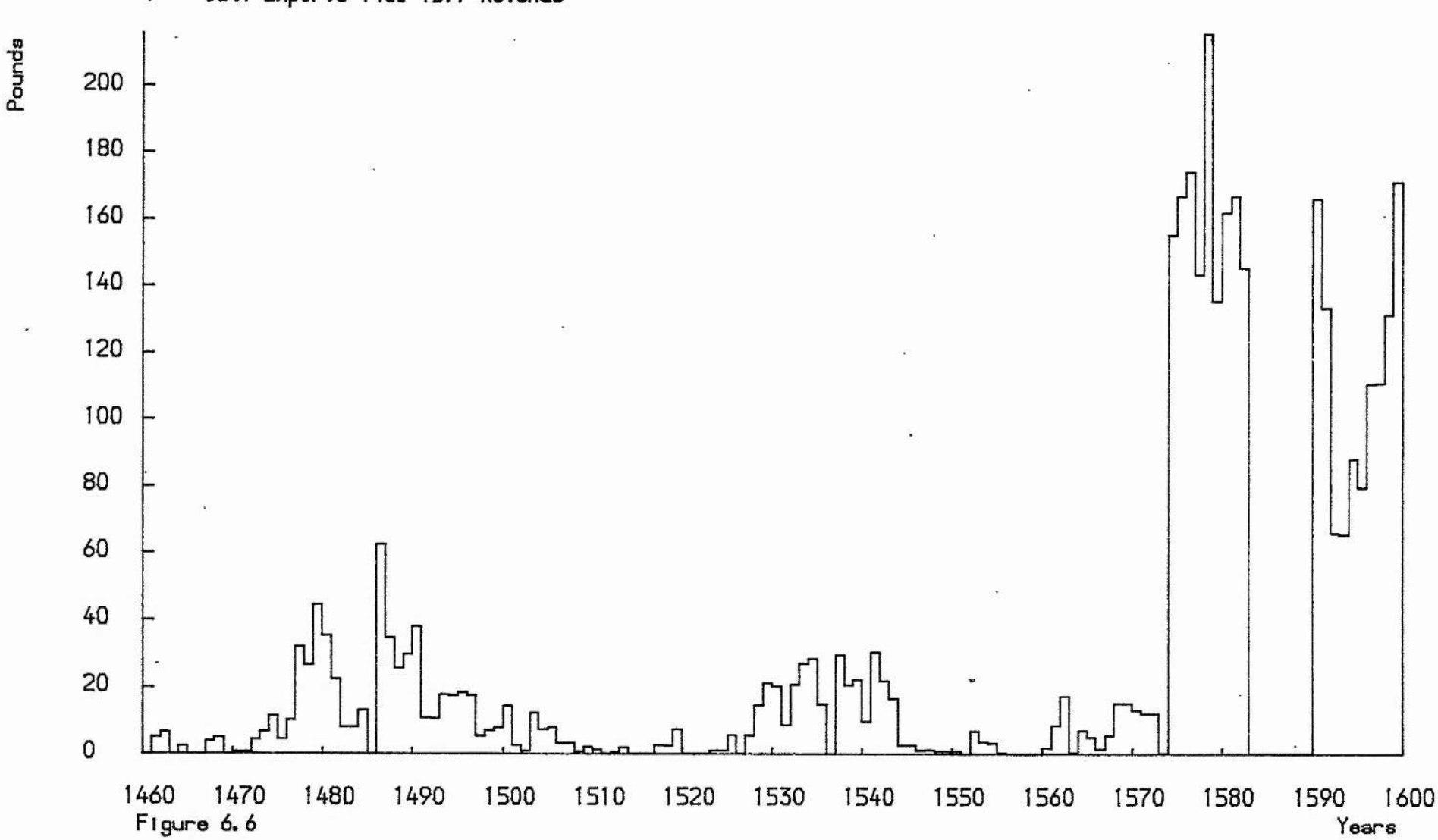

Salt Exports 1460-1599 Units
Chalders
900
800
700
600
500
400
300
200
100
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
1600
Years

Figure 6.5

Figure 6.5.a Classification chart : Top Exporting Burghs of Salt



<blank> : missing accounts - : short accounts = : regular accounts ▪ : long accounts
^^ : averaged series t : tack accounts I : irregular accounts


Salt Exports 1460-1599 Revenue
Pounds
200
180
160
140
120
100
80
60
40
20
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
1600
Years
Figure 6.6

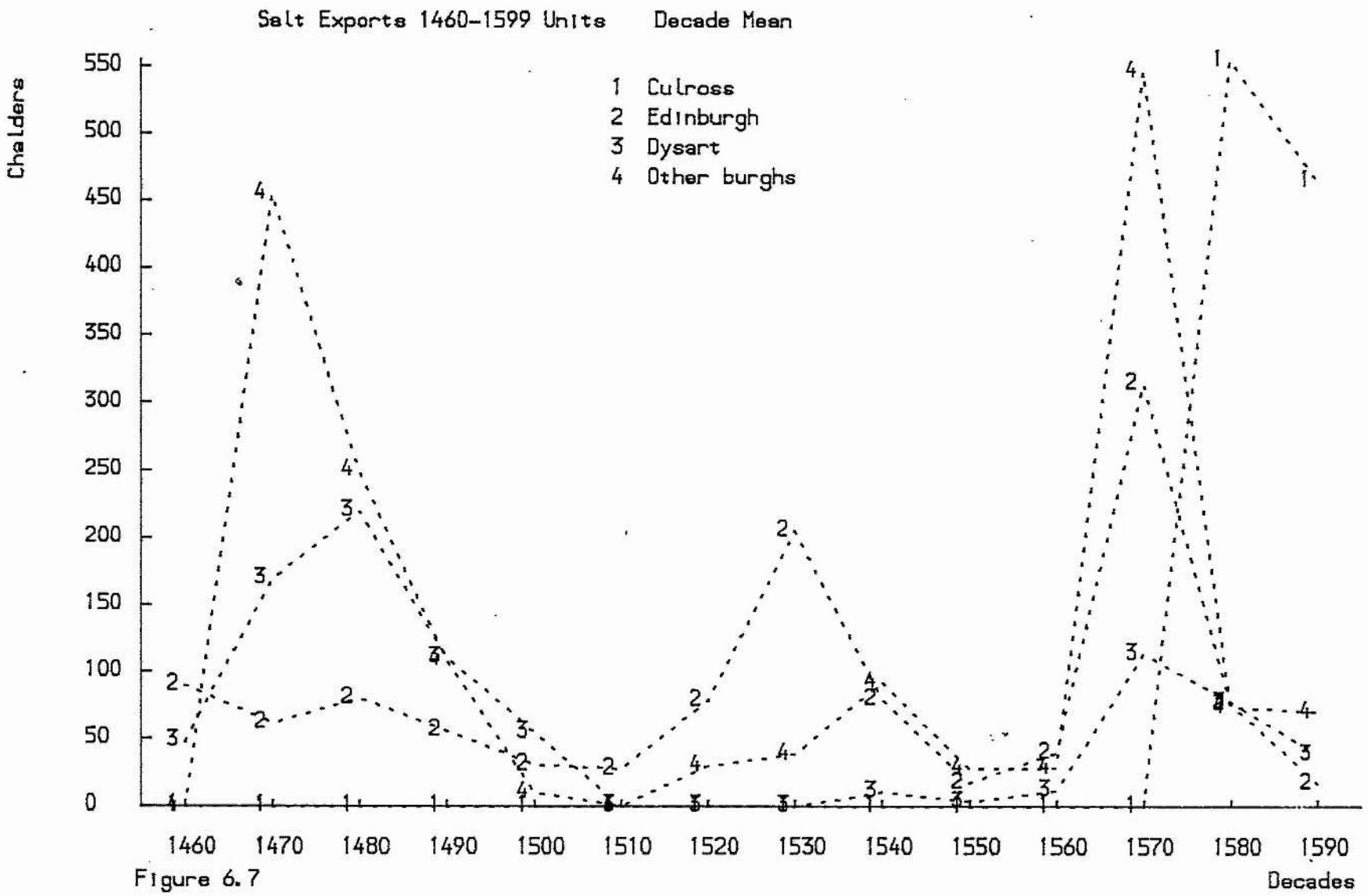

Salt Exports 1460-1599 Units Decade Mean
Chalders
1 Culross
2 Edinburgh
3 Dysart
4 Other burghs
550
500
450
400
350
300
250
200
150
100
50
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
Decades

Figure 6.7

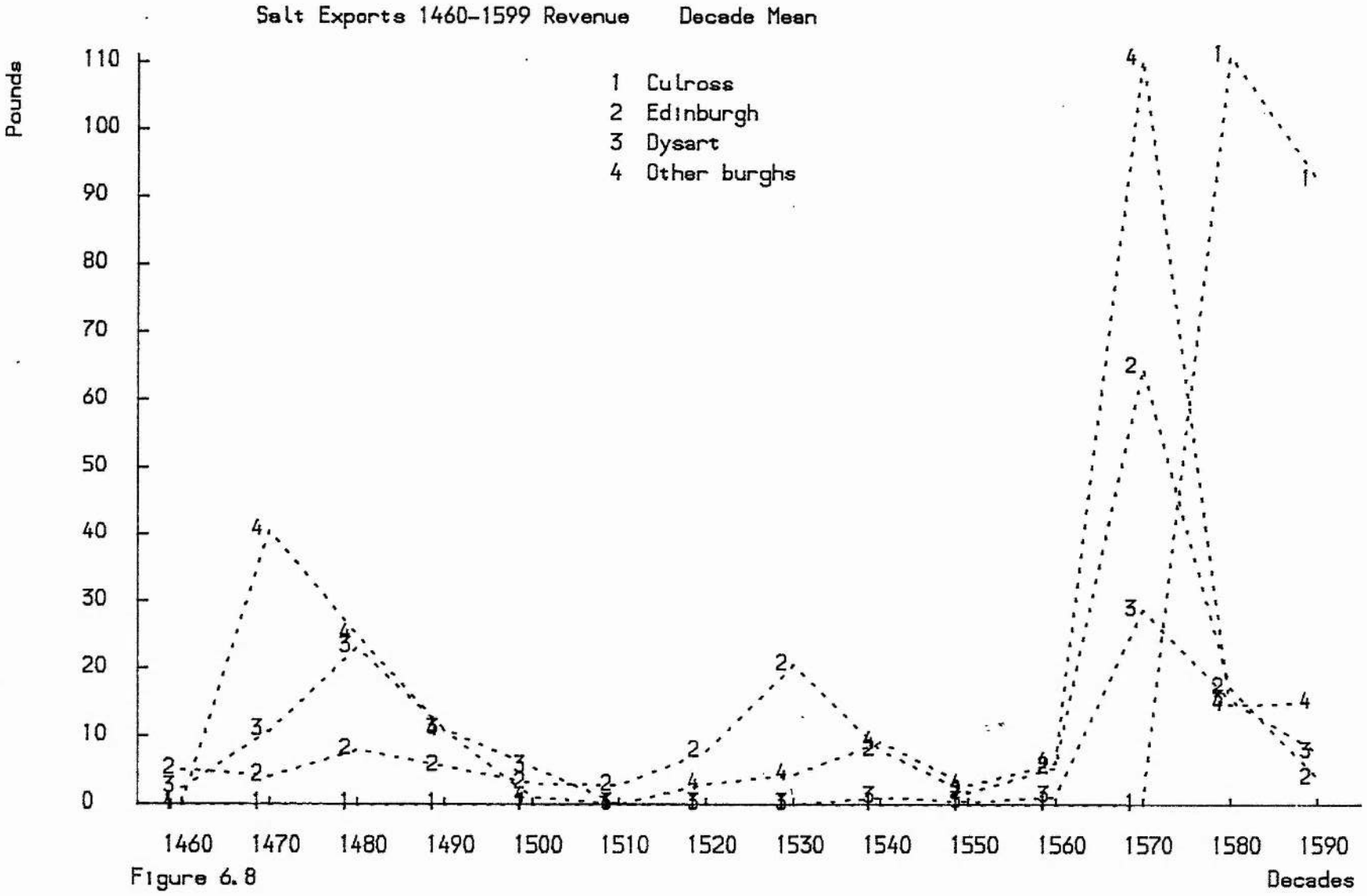

Salt Exports 1460-1599 Revenue Decade Mean
1 Culross
2 Edinburgh
3 Dysart
4 Other burghs
Pounds
110
100
90
80
70
60
50
40
30
20
10
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
Decades

Figure 6.8

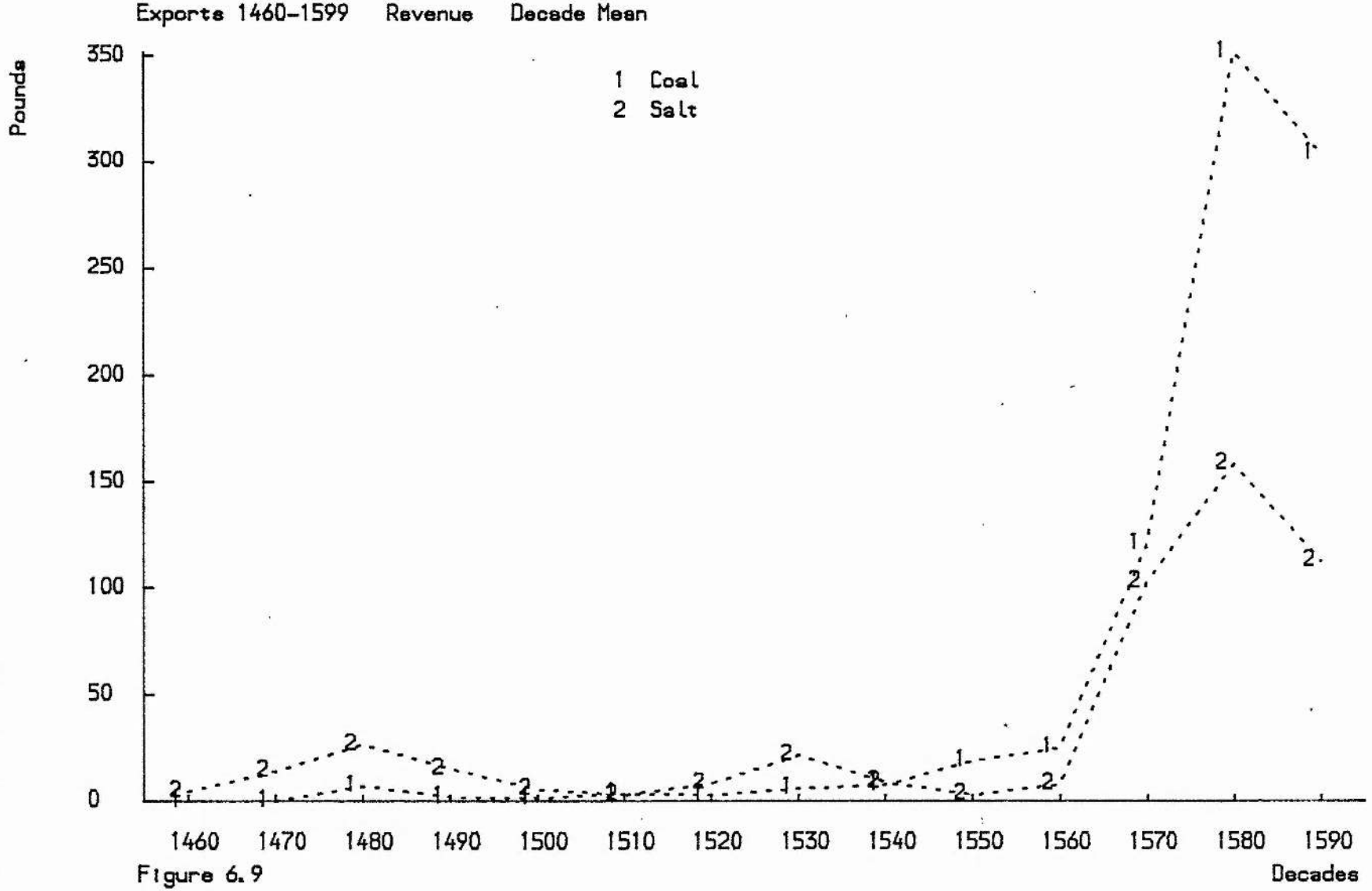

Exports 1460-1599 Revenue Decade Mean
1 Coal
2 Salt
Pounds
350
300
250
200
150
100
50
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
Decades

Figure 6.9

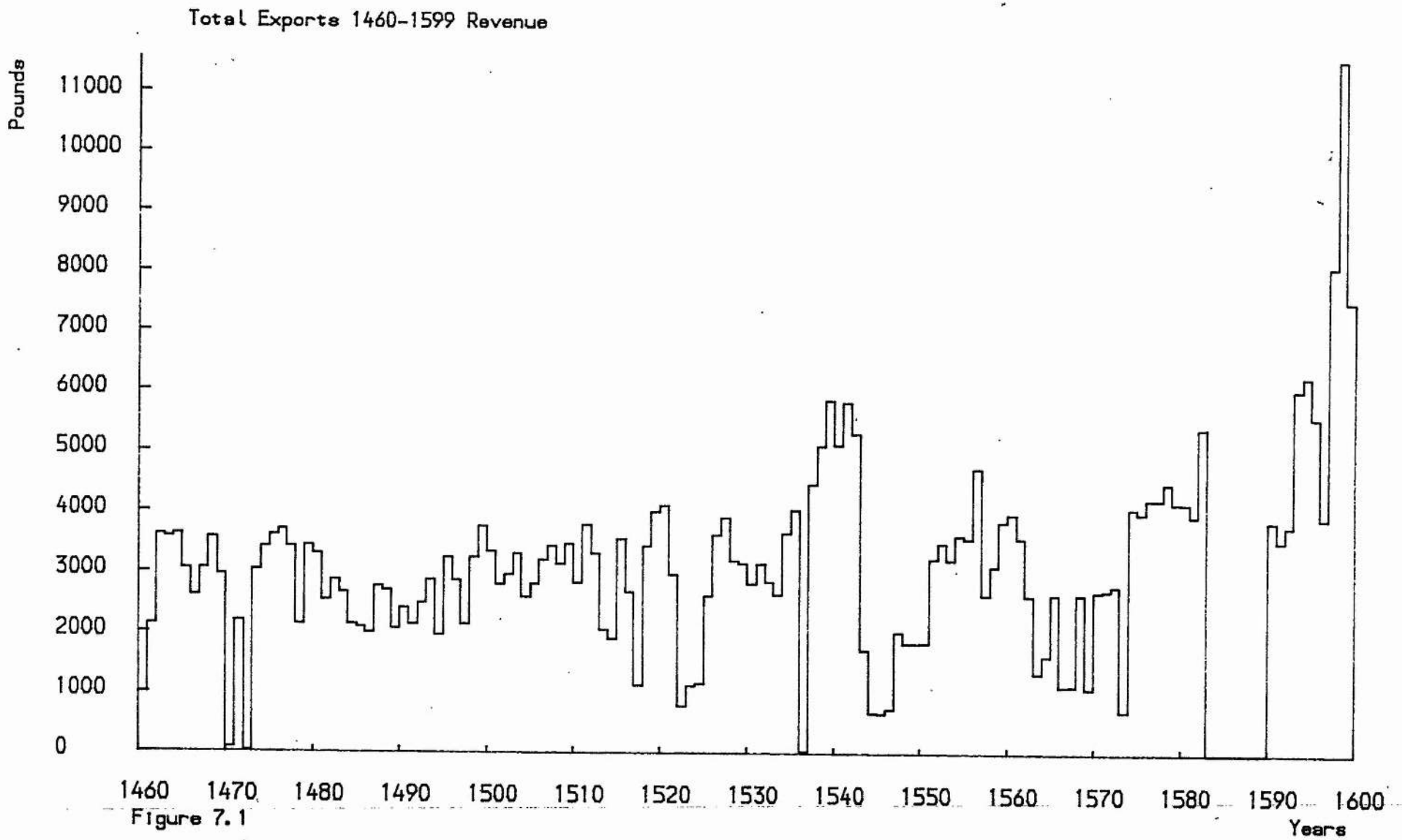
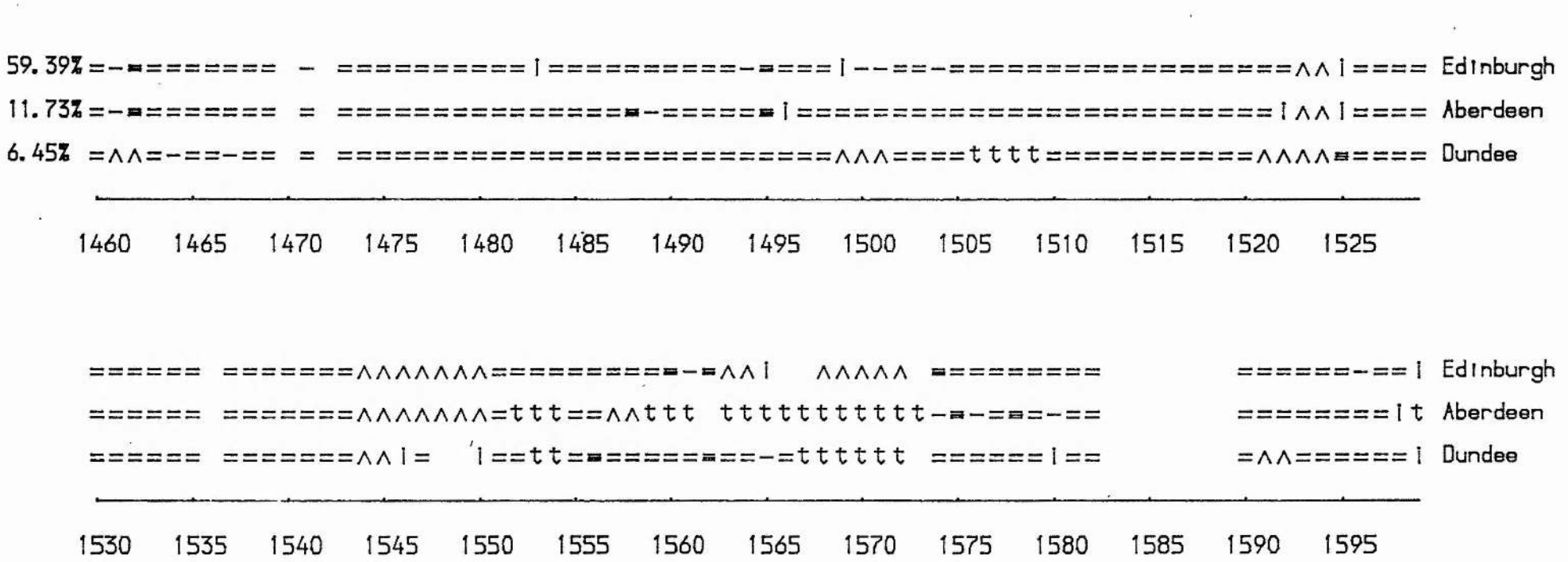

Total Exports 1460-1599 Revenue
Pounds
11000
10000
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
1600
Years

Figure 7.1

Figure 7.1.a Classification chart : Top Exporting Burghs of Total



<blank> : missing accounts - : short accounts = : regular accounts ▪ : long accounts
^^ : averaged series t : tack accounts I : irregular accounts

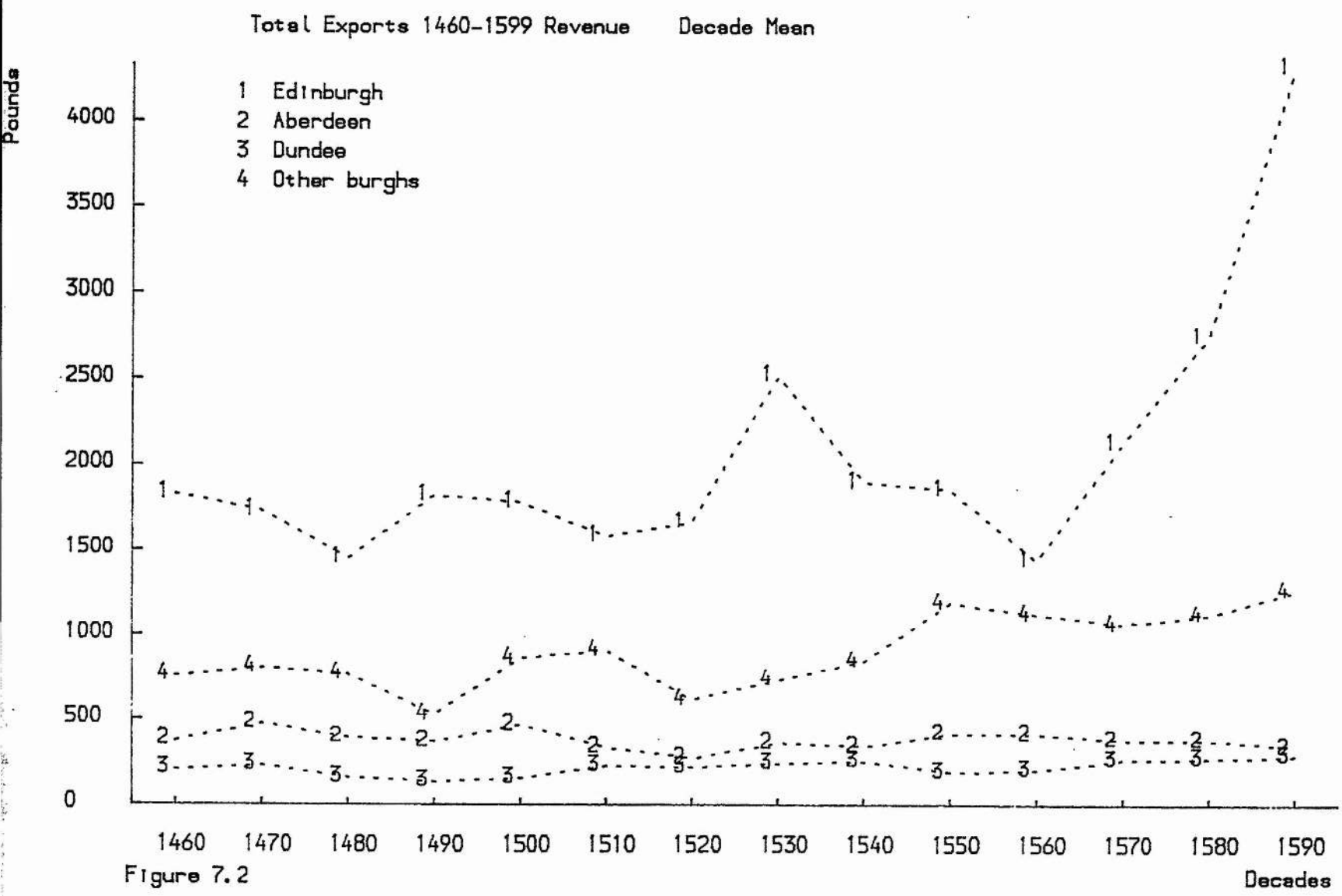
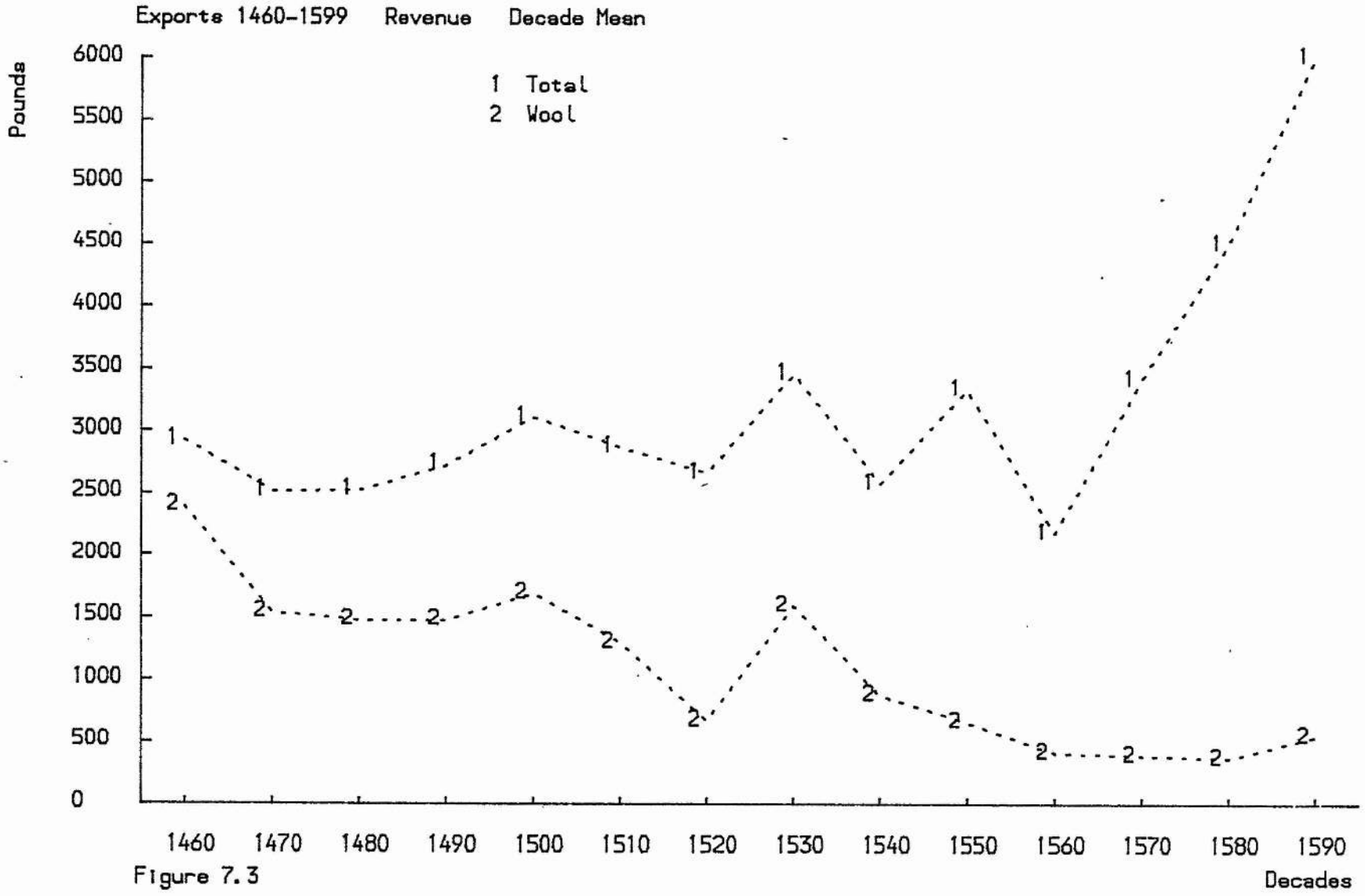

Total Exports 1460-1599 Revenue Decade Mean
1 Edinburgh
2 Aberdeen
3 Dundee
4 Other burghs
Pounds
4000
3500
3000
2500
2000
1500
1000
500
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
Decades

Figure 7.2


Exports 1460-1599 Revenue Decade Mean
1 Total
2 Wool
Pounds
6000
5500
5000
4500
4000
3500
3000
2500
2000
1500
1000
500
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
Decades
Figure 7.3

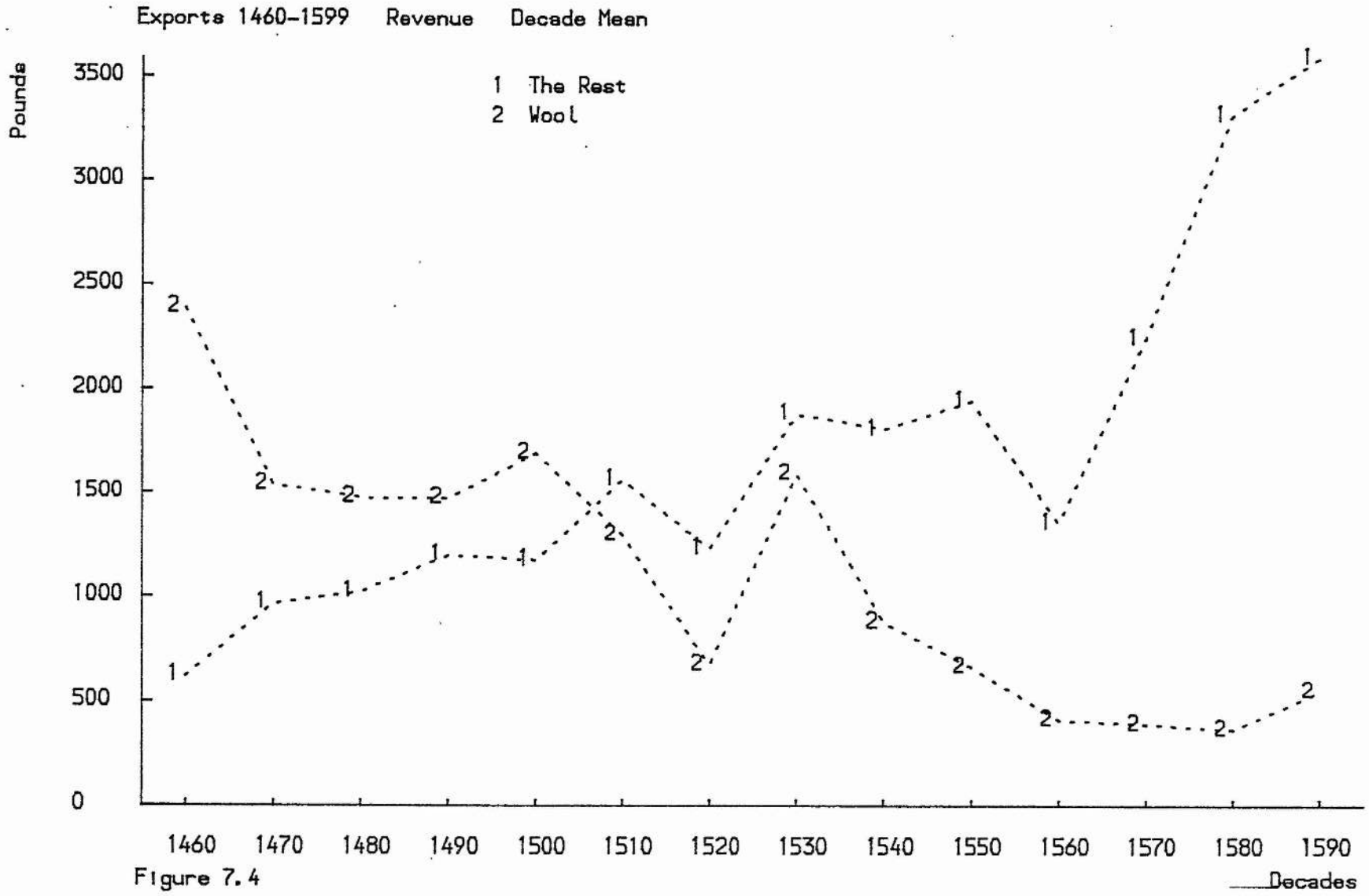

Exports 1460-1599 Revenue Decade Mean
1 The Rest
2 Wool
Pounds
3500
3000
2500
2000
1500
1000
500
0
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
Decades

Figure 7.4

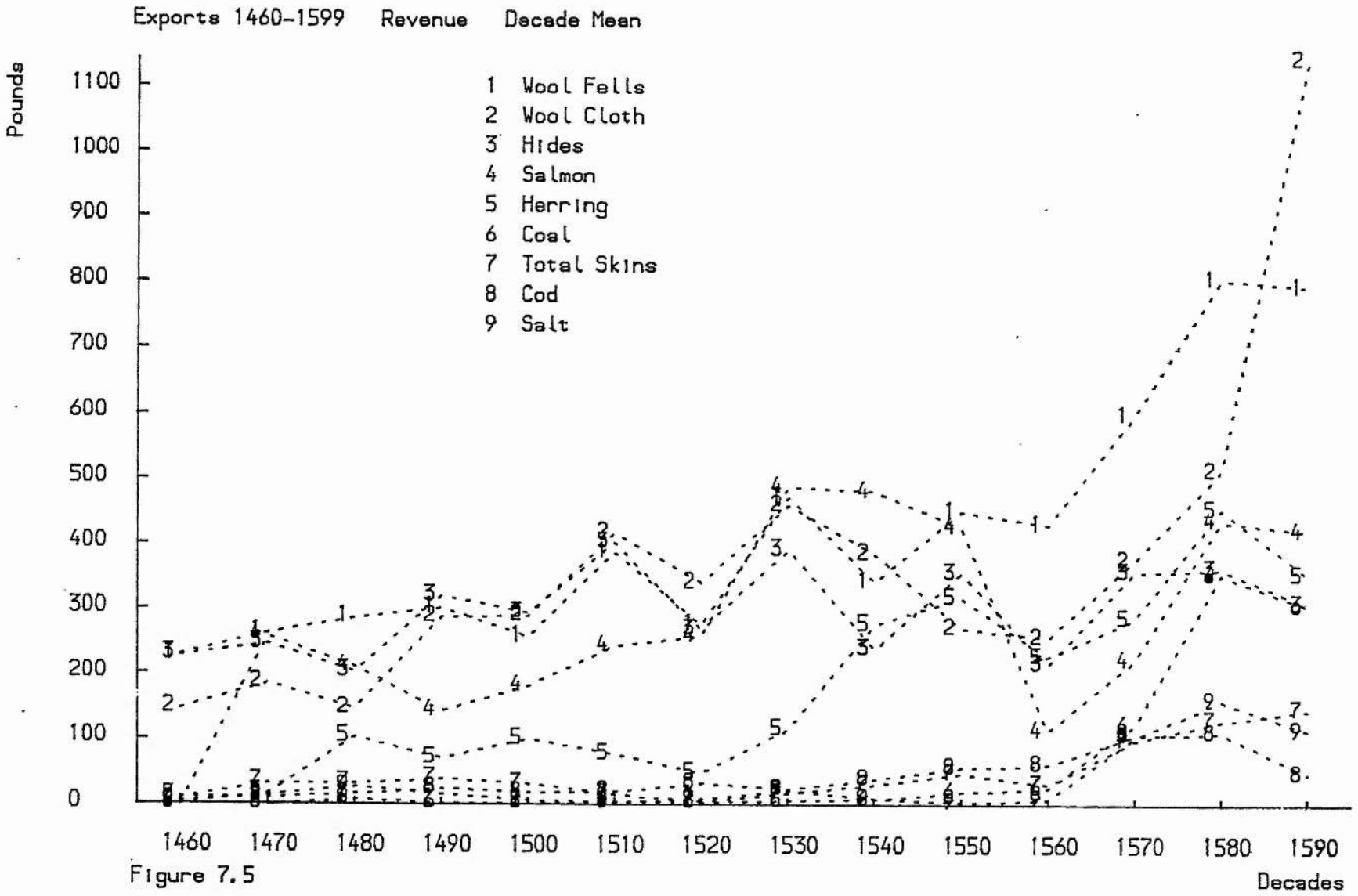

Exports 1460-1599 Revenue Decade Mean
Pounds
1100
1000
900
800
700
600
500
400
300
200
100
0
1 Wool Fells
2 Wool Cloth
3 Hides
4 Salmon
5 Herring
6 Coal
7 Total Skins
8 Cod
9 Salt
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
Decades

Figure 7.5